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The Code of Federal Regulations is sold by the Superintendent of Documents. Prices of new books are listed in the first FEDERAL REGISTER issue of each week.

DEPARTMENT OF AGRICULTURE

Federal Crop Insurance Corporation

7 CFR Part 400

[Docket No. 7968S]

General Administrative Regulations; Crop Insurance; Non-Standard Underwriting Classification System (NCS)

AGENCY: Federal Crop Insurance Corporation, USDA.

ACTION: Final rule.

SUMMARY: The Federal Crop Insurance Corporation (FCIC) adds a new subpart 0 to part 400 in chapter IV of title 7, Code of Federal Regulations to be known as the Non-Standard Underwriting Classification System Regulations (7 CFR part 400, subpart 0), effective for the 1991 and succeeding crop years. The intended effect of this rule is to set forth procedures and requirements for non-standard assigned yields and premium rates apart from yields and rates prescribed by standard actuarial tables.

EFFECTIVE DATE: August 10, 1990.

FOR FURTHER INFORMATION CONTACT: Peter F. Cole, Secretary, Federal Crop Insurance Corporation, U.S. Department of Agriculture, Washington, DC, 20250, telephone (202) 447-3325.

SUPPLEMENTARY INFORMATION: This action has been reviewed under USDA procedures established by Departmental Regulation 1512-1. This action constitutes a review as to the need, currency, clarity, and effectiveness of these regulations under those procedures. The sunset review date established for these regulations is December 1, 1994.

David W. Gabriel, Acting Manager, FCIC, (1) has determined that this action is not a major rule as defined by Executive Order 12291 because it will

not result in: (a) An annual effect on the economy of \$100 million or more; (b) major increases in costs or prices for consumers, individual industries, federal, State, or local governments, or a geographical region; or (c) significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic or export markets; and (2) certifies that this action will not increase the federal paperwork burden for individuals, small businesses, and other persons and will not have a significant impact on a substantial number of small entities.

This action is exempt from the provisions of the Regulatory Flexibility Act; therefore, no Regulatory Flexibility Analysis was prepared.

This program is listed in the Catalog of Federal Domestic Assistance under No. 10.450.

This program is not subject to the provisions of Executive Order 12372 which requires intergovernmental consultation with State and local officials. See the Notice related to 7 CFR part 3015, subpart V, published at 48 FR 29115, June 24, 1983.

This action is not expected to have any significant impact on the quality of the human environment, health, and safety. Therefore, neither an Environmental Assessment nor an Environmental Impact Statement is needed.

County actuarial tables issued from year to year by the Corporation prescribe standard crop insurance premium rates and yields. An evaluation of the accuracy of those standard actuarial tables has identified a relatively small number of crop insurance contracts (about 6%) that have accounted for about 28% of losses.

While the occurrence of a small number of extraordinary losses is a statistically normal expectation, the Corporation recognizes the limitations standard actuarial tables have in prescribing accurate premium rates and assigned yields for such instances and the peril those limitations pose to overall program soundness.

FCIC herein establishes a Non-Standard Underwriting Classification System to address extraordinary situations. Requirements for Non-Standard Classification are prescribed including both frequency and degree of

losses. Procedures for determining Non-Standard assigned yields and premium rates are included. Periodic reviews of Non-Standard determinations by the Corporation are required as are reviews at the request of affected persons. Appeal rights are reaffirmed and further clarified as they relate to these regulations.

On Tuesday, April 24, 1990, FCIC published a notice of proposed rulemaking in the *Federal Register* at 55 FR 17278, to set forth procedures and requirements for non-standard assigned yields and premium rates apart from yields and rates prescribed by standard actuarial tables. The public was given 30 days in which to submit written comments, data, and opinions on the rule. Comments on proposed rule were received from National Crop Insurance Services and American Association of Crop Insurers on behalf of their member companies. No other comments were received. Comments from both organizations covered issues that are summarized and discussed as follows:

1. The proposed rule will increase federal paperwork burden on farmers, insurance agents, and companies.

Response: The rule imposes no additional requirements for preparing, signing, or submission of forms, reports, certificates, etc. by farmers, insurance agents, or companies. The information necessary for implementation of this program is presently in our data base or is required for yield establishment.

2. Actuarial tables will be affected dramatically in size, accuracy, and timely issuance.

Response: The purpose of NCS is to address rate and coverage inaccuracies of a very small number of cases. The soybean insurance program with by far the greatest incidence of these cases will have only about 1 1/2% incidence of NCS adjustment for 1991. A preliminary review in Arkansas, which will have the second highest rate of soybean NCS adjustments by state, identified cases for adjustment in about 27 of 74 counties representing around 7% of current business. The typical increase in actuarial table size in those counties will be about four pages or less of which one is an instructional cover page.

Some counties will have larger actuarial tables by necessity with the addition of NCS classification documents. That increase is well justified by expected program savings.

However, dramatic increases in actuarial table size is not evident from the number of individuals classified, from the number of counties where classifications are assigned, or, from the number of additional document pages in each county.

Operational standards for accuracy and timely issuance of actuarial tables will not be changed to accommodate NCS.

3. Determination and verification of the "substantial beneficial interest" concept will be very difficult.

Response: Present procedures require that the insurable interest of each policyholder be verified. Other persons sharing an interest with the policyholder must be identified on the acreage report. Those names may be readily checked against NCS classification documents.

4. It appears that proposed rule will require an additional data base and will be very costly and another burden upon farmers and data users.

Response: No additional data base is required. NCS relies on existing data bases and data collection processes. FCIC performs all calculations required by the proposed rule using its data processing capabilities.

5. What is the status of NCS classifications during reconsiderations and appeals?

Response: An insured affected by an NCS classification is so notified and allowed 45 days in which to file a request for reconsideration. If the review finds no reason for change, the NCS classification is assigned. Since the NCS classification is placed in the actuarial table, and since the actuarial table must be filed before the contract change date, the insured has several months (from the date of notification to the contract cancellation date) to cancel his contract should he not choose to accept the classification assigned. In addition, the insured has the right to appeal this determination under the provisions of Subpart J—Appeal Process. The NCS classification will not take effect until both reconsideration and appeal are completed. If an insured's appeal is still pending 15 days prior to the contract cancellation date, FCIC will defer NCS changes to the following crop year.

6. Draft regulations indicate nothing about how the NCS provision will be applied by an agent or company.

Response: Standard operating procedures regarding the application of NCS regulations by companies and agents are pending publication of the final rule. Procedures issued in advance of public comment and final rule would be speculative and inappropriate. However, NCS procedures will not vary

substantially from those currently used for determining rates and coverages.

7. NCS rates and coverages may not be assigned correctly.

Response: NCS documents will be part of the Actuarial Document Book. These documents are currently in use. No new forms will be created within these documents. Since the NCS classification will be contained in the Actuarial Material and since that material is presently used to establish rates and coverages, no additional complexity is envisioned.

8. Several issues were raised concerning the NCS selection process, as follows:

a. *Comment:* The selection formula is not validated by statistical research.

Response: The comment is correct for the reason that adequate statistical data does not exist, nor, will such data exist in the foreseeable future given the nature of the crop insurance program. Nonetheless, FCIC must be responsive to those individual instances experiencing frequent and extreme losses clearly beyond reasonable expectations. The purpose of NCS is to prescribe a standard for identifying and correcting adverse loss situations using existing data resources.

b. *Comment:* Policies with a number of units and for which insurance has been in effect for several years are highly likely to be selected.

Response: The insurance standard formula is based on the loss frequency and loss severity of an insured's insurance experience. It is more likely that an individual with several years of experience will have at least one loss. This is the reason the selection criteria includes a high frequency of loss years as part of the selection standard.

c. *Comment:* The formula is weighted to policies with insurance experience and does not predict high risk policies with little insurance experience.

Response: Since the selection standard is based on an insurance experience, this observation is correct. NCS is a loss control mechanism which uses specific underwriting adjustments to reduce future losses. NCS was not designed to predict potential high risk policies since no effective controls are possible with information currently collected during the sales process. We agree that mechanisms for identifying such high risk policies through pre-loss underwriting are needed, and we will welcome collaborative efforts to achieve this.

d. *Comment:* The formula may select a high percentage of policies as a result of catastrophic conditions (Montana Wheat).

Response: The selection standard does account for catastrophic conditions by comparing loss experience for the crop for individual policies to the loss experience for the crop within the state. This reduces the number of policies selected for NCS in a catastrophic area. In section 303(a)2. of the proposed rule, FCIC may vary the selection standard to accommodate occurrences of catastrophic loss in an area as small as a county. Such instances will be handled through overall adjustments affecting all producers and not through individual adjustments.

9. An effective tracking system would eliminate the need for NCS and enhance the enforcement of normal yield reductions.

Response: Insureds can change their farming operation and avoid yield reductions. Yield reductions are not responsive enough when dealing with the category of insureds NCS will address.

10. Insurance experience of a person used to classify land would unduly carry over from one producer to another.

Response: Whether an NCS classification is assigned to the person growing the insured crop or to the land on which the crop is grown is dependent on each individual circumstance. If previous adverse experience can be attributed to conditions associated with the land such as extremely eroded soil or frequent flooding then the NCS classification will be assigned to that land and future persons without affecting other land being farmed by those persons. If adverse insurance experience cannot be clearly associated with a land condition, then the experience is charged to the managerial ability of the person actively engaged in growing the crop and to whom the NCS classification will be assigned. Different persons producing the crop on the same land in future years will not be affected.

The intent of NCS in any event is to address remedial actions directly to the cause of previous adverse insurance experience. Annual reviews will maintain remedial actions of a current basis. Reconsideration and appeal rights provide an ongoing opportunity for input to the NCS process by those persons affected.

11. The NCS notice should be given by the policy writer in the case of private policies reinsured by FCIC.

Response: Insureds may change companies from year to year. Due to the lag year in the NCS base period, the person's insurance company is not definitely known. Since timely notification is essential, notice must be given to every person assigned a

nonstandard classification, and to any company from which the person may attempt to purchase crop insurance.

12. The assertion by FCIC is challenged that major increases in costs or prices will not result.

Response: Increases in insurance rates will affect some insureds. The reference to increase in costs refers to the general public and in that sense the comment is not correct. As noted earlier, these classifications will be incorporated into existing documents. No new forms will be created, nor will there be need for agents or companies to contact a third party for sales and servicing. The comment ignores the potential savings of tax monies and insured farmers' premiums which otherwise will be spent on larger indemnities.

In addition to the comments above, a typographical error was discovered in § 404.303(c). In that paragraph "Insurable acreage" is correctly changed to read "insured acreage." Also, based on the comments received, a clarification of terms in § 400.300(c) will be made. The term "adjustment factor" will be assigned to yield factor. This change is needed to maintain consistency in terminology of the proposed rule. See § 400.305(a).

In implementing these rules it is necessary to provide insureds with an extensive period of time following notification of classification changes in order to allow for requests for reconsideration. On September 1, FCIC mails actuarial data books, containing information of reclassification of individual policyholders farmland, to the respective agents offices. However, before such mailing occurs, policyholders are advised of the reclassification of land, and if such reclassification is challenged, approximately 60 days are allowed in which the policyholder request a reconsideration. In addition, extra time must be allowed to complete mailing notices and processing request from policyholders. FCIC has determined that, in order to provide sufficient time for this lengthy process, and to provide ample time for policyholders to receive timely consideration before the 1991 crop year coverage is effective, good cause is shown for making this rule effective in less than 30 days. Therefore, with the exception of minor changes in language and format outlined above, the rule published at 55 FR 17278 is hereby adopted as a final rule to become effective upon publication in the Federal Register.

Final Rule

Accordingly, pursuant to the authority contained in the Federal Crop Insurance Act, as amended (7 U.S.C. 1501 *et seq.*), the Federal Crop Insurance Corporation amends the General Administrative Regulations, effective for the 1991 and succeeding crop years, to add a new subpart O to part 400 of chapter IV of title 7 of the Code of Federal Regulations, to be known as 7 CFR part 400, General Administrative Regulations; Subpart O, Non-Standard Underwriting Classification System, to read as follows:

PART 400—GENERAL ADMINISTRATIVE REGULATIONS

Subpart O—Non-Standard Underwriting Classification System Regulations for the 1991 and Succeeding Crop Years

- Sec.
- 400.301 Basic, purpose, and applicability.
 - 400.302 Definitions.
 - 400.303 Initial selection criteria.
 - 400.304 Nonstandard classification determinations.
 - 400.305 Assignment of nonstandard classifications.
 - 400.306 Spouses and minor children.
 - 400.307 Discontinuation of participation.
 - 400.308 Notice of nonstandard classification.
 - 400.309 Requests for reconsideration.

Authority: 7 U.S.C. 1506, 1516.

Subpart O—Non-Standard Underwriting Classification System Regulations for the 1991 and Succeeding Crop Years

§ 400.301 Basis, purpose, and applicability.

The regulations contained in this subpart are issued pursuant to the Federal Crop Insurance Act, as amended (7 U.S.C. 1501 *et seq.*) (the Act), to prescribe the procedures for nonstandard determinations and the assignment of assigned yields and/or premium rates in conformance with the intent of section 508 of the Act (7 U.S.C. 1508). These regulations are applicable to all policies of insurance insured or reinsured by the Corporation under the Act.

§ 400.302 Definitions.

- (a) *Act*—means Federal Crop Insurance Act as amended (7 U.S.C. 1501 *et seq.*).
- (b) *Actively engaged in farming*—means that a person in return for a share of profits and losses makes a contribution to the production of an insurable crop of capital, equipment, personal, labor, and/or personal management.

(c) *Actual Yield*—means total harvested production of a crop divided by the number of acres on which the crop was planted. For insured acres, actual yield is the total production to count as defined in the insurance policy, divided by insured acres.

(d) *Assigned yield*—means units of crop production per acre administratively assigned by the Corporation for the purpose of determining insurance coverage.

(e) *Base period*—means the 10 preceding crop years through the next to last crop year.

(f) *Corporation*—means the Federal Crop Insurance Corporation.

(g) *Cumulative earned premium rate*—is the total premium earned for all years in the base period, divided by the total liability for all years in the base period with the result expressed as a percentage.

(h) *Cumulative loss ratio*—means the ratio of total indemnities to total earned premiums during the base period expressed as a decimal.

(i) *Earned premium rate*—means premium earned divided by liability and expressed as a percentage.

(j) *Entity*—means a person as defined in this subpart other than an individual.

(k) *Insurance experience*—means premium earned, indemnities paid, and other data resulting from a crop insurance policy insured or reinsured by the Corporation.

(l) *Loss ratio*—means the ratio of indemnity to earned premium expressed as a decimal.

(m) *Person*—means an individual, partnership, association, corporation, estate, trust, or other legal entity, and whenever applicable, a State or a political subdivision, or agency of a state.

(n) *Substantial beneficial interest*—means an interest of 10 percent or more. In determining whether such an interest equals at least 10 percent, all interests which are owned directly or indirectly through such means as ownership of shares in a corporation which owns the interest will be taken into consideration.

§ 400.303 Initial selection criteria.

(a) Nonstandard Classification procedures in the subpart initially apply when both of the following insurance experience criteria have been met:

- (1) Three (3) or more indemnified losses which exceed earned premium during the base period; and
- (2) The natural logarithm of cumulative earned premium rate multiplied by the square root of the cumulative loss ratio equals 2.00 or greater. The minimum standard of 2.00

may be increased provided the increased standard applies to all insurance experience in the same county.

(b) Selection criteria may be applied on the basis of insurance experience of a person, insured acreage, or the combination of both.

(1) Insurance experience of a person will include:

(i) Insurance experience of the person;

(ii) Insurance experience of other insured entities in which the person had substantial beneficial interest if the person was actively engaged in farming of the insured crop by virtue of the person's interest in those insured entities;

(iii) Insurance experience of a spouse and minor children if the person is an individual and the spouse and minor children are considered the same as the individual under § 400.306.

(2) Insurance experience of insured acreage includes all insurance experience during the base period resulting from the production of the insured crop on the acreage.

(3) Where insurance experience is based on a combination of person and insured acreage, the insurance experience will include the experience of the person as defined in paragraph (b) of this section (1) only on the specific insured acreage during the base period.

§ 400.304 Nonstandard Classification determinations.

(a) Nonstandard Classification determinations can affect a change in assigned yields, premium rates, or both from those otherwise prescribed by the insurance actuarial tables.

(b) Changes of assigned yields based on insurance experience of insured acreage (or of a person on specific insured acreage) will be based on the simple average of available actual yields from the insured acreage during the base period.

(c) Changes of assigned yields based on insurance experience of a person without regard to any specific insured acreage will be determined by an assigned yield factor calculated by multiplying excess loss cost ratio by loss frequency and subtracting that product from 1.00 where:

(1) Excess loss cost ratio is total indemnities divided by total liabilities for all years of insurance experience in the base period and the result of which is then reduced by the cumulative earned premium rate, expressed as a decimal, and

(2) Loss frequency is the number of crop years in which an indemnity was paid divided by the number of crop

years in which premiums were earned during the base period.

(d) Changes of premium rates will be made to reflect premium rates that would have resulted in insurance experience during the base period with a loss ratio of 1.00 but:

(1) A higher loss ratio than 1.00 may be used for premium rate determinations provided that the higher loss ratio is applied uniformly in a county; and

(2) If a Nonstandard Classification change has been made to current assigned yields, insurance experience during the base period will be adjusted to reflect the affects of changed assigned yields before changes of premium rates are calculated based on that experience.

(e) Once selection criteria have been met in any year, Nonstandard Classification adjustments will be made from year to year until no further changes are necessary in assigned yields or premium rates under the conditions set forth in § 400.304(f). In determining whether further changes are necessary, the eligibility criteria will be recomputed each subsequent year using the premium rates and yields which would have been applicable had this part not been in effect.

(f) Nonstandard Classification changes will not be made that:

(1) Increase assigned yields or decrease premium rates from those otherwise assigned by the actuarial tables, or

(2) Result in less than a 10 percent decrease in assigned yields or less than a 10 percent increase in premium rates from those otherwise assigned by the actuarial tables.

§ 400.305 Assignment of Nonstandard Classifications.

(a) Assignment of a Nonstandard Classification of assigned yields, assigned yield factors, or premium rates shall be made on forms approved by the Corporation and included in the actuarial tables for the county.

(b) Nonstandard Classification assignment will be made each year for the year identified on the assignment forms and not subject to change under the provisions of this subpart by the Corporation for that year when included in the actuarial tables for the county except as a result of a request for reconsideration as provided in subsection § 400.309, or as the result of appeals under subpart J.

(c) Nonstandard Classifications may be assigned to identified insurable acreage; person; or, to a combination of person and identified acreage whereby:

(1) Classifications assigned to identified insurable acreage apply to all

acres of the insured crop grown on the identified acreage;

(2) Classifications assigned to a person apply to all insurable acres of the insured crop on which the person and any entity in which the person has substantial beneficial interest is actively engaged in farming; and

(3) Classifications assigned to a combination of a person and identified insurable acreage will only apply to those acres of the insured crop grown on the identified acreage on which the named person is actively engaged in producing such crop.

§ 400.306 Spouses and minor children.

(a) The spouse and minor children of an individual are considered to be the same as the individual for purposes of this subpart except that:

(1) The spouse who was actively engaged in farming in a separate farming operation prior to their marriage will be a separate person with respect to that separate farming operation so long as that operation remains separate and distinct from any farming operation conducted by the other spouse;

(2) A minor child who is actively engaged in farming in a separate farming operation will be a separate person with respect to that separate farming operation if:

(i) The parent or other entity in which the parent has a substantial beneficial interest does not have any interest in the minor's separate farming operation or in any production from such operation;

(ii) The minor has established and maintains a separate household from the parent;

(iii) The minor personally carries out the farming activities with respect to the minor's farming operation; and

(iv) The minor establishes separate accounting and recordkeeping for the minor's farming operation.

(b) An individual shall be considered to be a minor until the age of 18 is reached. Court proceedings conferring majority on an individual under 18 years of age will not change such individual's status as a minor.

§ 400.307 Discontinuation of participation.

In the event that insurance participation is interrupted for one or more years following the assignment of a Nonstandard Classification, the most recent Nonstandard Classification assigned will be continued from year to year until participation has been renewed for at least one crop year and at least three years of insurance experience have occurred in the current base period.

§ 400.308 Notice of Nonstandard Classification.

(a) The Corporation will give written notice to all persons to whom a Nonstandard Classification will be assigned. The notice will give the Nonstandard Classification and the person's rights and responsibilities according to this subpart.

(b) The person, upon receiving notice from the Corporation, will be responsible for giving notice of the Nonstandard Classification to any other person with an insurable interest affected by the classification. The person will give notice to any other affected person:

(1) Prior to the sales closing date if the other affected person has an established insurable interest at the time the classified person is notified by the Corporation; or

(2) Prior to the Classified person's establishing an insurable interest of another person that will be affected by the classification.

§ 400.309 Requests for reconsideration.

(a) Any person to be assigned a Nonstandard Classification under this subpart will be notified of and allowed not less than 45 days from the date notice is received to request reconsideration before the Nonstandard Classification becomes effective. The request will be considered to have been made when received, in writing, by the Corporation.

(b) Upon receipt of a timely request for reconsideration from the person to whom the classification will be assigned, the Corporation will:

(1) Review all information supplied by, and respond to all questions raised by the individual, or

(2) In the absence of information and questions, review insurance experience and determinations for compliance with this subpart and report review results to the individual requesting reconsideration.

(c) Upon review of a request for reconsideration, the classification to be assigned will be corrected for:

(1) Errors and omissions in insurance experience;

(2) Incorrect calculations under procedures in this subpart, and

(3) Typographical errors.

(d) If the review finds no cause for change, the classification will be amended and placed on file in the actuarial tables for the county.

(e) If a request for reconsideration has not been timely made by a person within the 45 days as prescribed by this section, appeal rights under regulations contained in 7 CFR part 400, subpart J, and subsequent regulations, will be

considered to have been waived by that person with regard to the Nonstandard Classification.

(f) Any person not satisfied by a determination of the Corporation upon reconsideration may further appeal under the provisions of 7 CFR part 400, subpart J.

Done in Washington, DC, on July 16, 1990.

David W. Gabriel,

Acting Manager, Federal Crop Insurance Corporation.

[FR Doc. 90-18778 Filed 8-9-90; 8:45 am]

BILLING CODE 3410-08-M

Agricultural Marketing Service**7 CFR Part 989**

[FV-90-150FR]

Raisins Produced From Grapes Grown in California, Changing the Definition of the Dipped Seedless Varietal Type

AGENCY: Agricultural Marketing Service, USDA.

ACTION: Final rule.

SUMMARY: This final rule revises the administrative rules and regulations of the marketing order regulating raisins produced from grapes grown in California. This action revises the definition of the Dipped Seedless varietal type to include only dehydrated seedless grapes that possess characteristics similar to the Thompson Seedless variety. This action is necessary because dehydrators have begun making raisins from other seedless varieties of grapes which do not have similar characteristics to the traditional Dipped Seedless raisin. This action was unanimously recommended by the Raisin Administrative Committee (Committee), which is responsible for local administration of the marketing order.

EFFECTIVE DATE: August 10, 1990.

FOR FURTHER INFORMATION CONTACT:

Patricia A. Petrella, Marketing Specialist, Marketing Order Administration Branch, Fruit and Vegetable Division, AMS, USDA, room 2525-S, P.O. Box 96456, Washington, DC 20090-6456; telephone: (202) 475-3920.

SUPPLEMENTARY INFORMATION: This final rule is issued under marketing agreement and Order No. 989 (7 CFR part 989), both as amended, regulating the handling of raisins produced from grapes grown in California, hereinafter referred to as the "order." The order is effective under the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601-674), hereinafter referred to as the "Act."

This final rule has been reviewed by the U.S. Department of Agriculture (Department) in accordance with Departmental Regulation 1512-1 and the criteria contained in Executive Order 12291 and has been determined to be a "non-major" rule.

Pursuant to requirements set forth in the Regulatory Flexibility Act (RFA), the Administrator of the Agricultural Marketing Service (AMS) has considered the economic impact of this action on small entities.

The purpose of the RFA is to fit regulatory actions to the scale of business subject to such actions in order that small businesses will not be unduly or disproportionately burdened. Marketing orders issued pursuant to the Act, and rules issued thereunder, are unique in that they are brought about through group action of essentially small entities acting on their own behalf. Thus, both statutes have small entity orientation and compatibility.

There are approximately 25 handlers of raisins who are subject to regulation under the raisin marketing order and approximately 5,000 producers in the regulated area. Small agricultural producers have been defined by the Small Business Administration (13 CFR 121.2) as those having annual receipts of less than \$500,000, and small agricultural service firms are defined as those whose annual receipts are less than \$3,500,000. The majority of producers and a minority of handlers of California raisins may be classified as small entities.

Section 989.10 of the marketing order provides that the Committee, with the approval of the Secretary, may change the list of varietal types. This action will amend § 989.110 of the rules and regulations by revising the definition of the Dipped Seedless varietal type.

Varietal type is defined in § 989.10 of the order to mean raisins generally recognized as possessing characteristics differing from other raisins in a degree sufficient to make necessary or desirable separate identification and classification. Therefore, a particular varietal type of raisin defined in the rules and regulations would include raisins with similar characteristics and market uses. Raisins are separated into varietal types for the purpose of applying the order's quality and volume regulations.

This action could also have an impact in connection with volume regulations. For example, more production could be reported in the Other Seedless and Monukka categories and less production in the Dipped Seedless categories once this change is made.

Section 989.110(b) currently provides that the Dipped Seedless varietal type includes all raisins produced by artificial dehydration of seedless grapes which, in order to expedite drying, have been dipped or sprayed with water only after such grapes have been removed from the vine. Seedless grapes would include Thompson Seedless, Ruby Seedless, Kings Ruby Seedless, Flame Seedless, and Monukka. Therefore, under the current definition of Dipped Seedless, all of the above-listed grape varieties that are dehydrated using the method to make Dipped Seedless raisins are classified as such.

Historically, dehydrators have used the Thompson Seedless grape variety (green seedless grapes) to make raisins which are categorized as Dipped Seedless raisins. The marketing order defines a dehydrator as any person who produces raisins by dehydrating grapes by artificial means (7 CFR 989.12). Recently, dehydrators have begun to dehydrate Ruby Seedless, Kings Ruby Seedless, Flame Seedless, and Monukka grapes (red seedless grapes) to make raisins. Dehydrators have reported, as required by the current definition and the reporting requirements, these dehydrated raisins as belonging to the Dipped Seedless varietal type category.

However, dehydrated Ruby Seedless, Kings Ruby Seedless, and Flame Seedless grapes have characteristics that more closely resemble those in the Other Seedless varietal type, and dehydrated Monukka grapes have characteristics that more closely resemble those in the Monukka varietal type. Therefore, the Committee has recommended that the definition of the Dipped Seedless varietal type include only dehydrated seedless grapes that possess characteristics similar to the Thompson Seedless variety. Thus, raisins made from dehydrated Ruby Seedless, Kings Ruby Seedless, and Flame Seedless grapes would be more appropriately categorized in the Other Seedless raisin varietal type, and raisins made from dehydrated Monukka grapes would be more appropriately categorized in the Monukka varietal type. Thus, no additional changes in the varietal type definitions are necessary.

A proposed rule on this action was published in the *Federal Register* on June 8, 1990 [55 FR 23445]. That rule provided that interested persons could file written comments through July 9, 1990. No comments were received.

Based on the above information, the Administrator of the AMS has determined that issuance of this final rule will not have a significant economic impact on a substantial number of small entities.

After consideration of all relevant information presented, including the Committee's recommendations, and other information, it is found that this action, as hereinafter set forth, will tend to effectuate the declared policy of the Act.

Pursuant to 5 U.S.C. 553, it is further found and determined that good cause exists for not postponing the effective date of this action until 30 days after publication in the *Federal Register* because: (1) The crop year begins on August 1, 1990; (2) producers could begin delivering raisins soon and handlers are required to report deliveries by varietal type; and (3) handlers are aware of this action, which was recommended by the Committee at an open meeting, and need no additional time to comply with this change.

List of Subjects in 7 CFR Part 989

Grapes, Marketing agreements, Raisins, Reporting and recordkeeping requirements.

For the reasons set forth in the preamble, 7 CFR part 989 is amended as follows:

PART 989—RAISINS PRODUCED FROM GRAPES GROWN IN CALIFORNIA

1. The authority citation for 7 CFR part 989 continues to read as follows:

Authority: Sections 1–19, 48 Stat. 31, as amended, 7 U.S.C. 601–674.

Subpart—Administrative Rules and Regulations

2. Section 989.110 is amended by revising paragraph (b) to read as follows:

Note: This section will appear in the annual Code of Federal Regulations.

§ 989.110 Varietal types.

(b) Dipped Seedless includes all raisins produced by artificial dehydration of seedless grapes that possess the characteristics similar to Thompson Seedless grapes which, in order to expedite drying, have been dipped in or sprayed with water only after such grapes have been removed from the vine.

Dated: August 6, 1990.

William J. Doyle,

Associate Deputy Director, Fruit and Vegetable Division.

[FR Doc. 90–18773 Filed 8–9–90; 8:45 am]

BILLING CODE 3410-02-M

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 83-ASW-38; Amdt. 39-6686]

Airworthiness Directives; Enstrom Helicopter Model F-28A, F-28C, F-28C-2, F-28F, 280, 280C, and 280F Series Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Enstrom helicopters, which supersedes an existing AD. The new AD requires a material hardness check, repetitive inspections and lubrication, and imposes a 1200-hour time in service life limit on tail rotor drive shaft couplings used on certain models. This AD is needed to prevent a tail rotor drive shaft coupling failure which, in turn, could result in loss of directional control of the helicopter.

EFFECTIVE DATE: September 7, 1990.

ADDRESSES: The applicable service bulletin, Enstrom Service Directive Bulletin 0065, Revision A, dated June 1, 1984, may be obtained from Enstrom Helicopter Corporation, P.O. Box 277, Menominee, Michigan 49858. A copy of the service bulletin may be examined in the Regional Rules Docket, Office of the Assistant Chief Counsel, Federal Aviation Administration, 4400 Blue Mound Road, Building 3B, Room 158, Fort Worth, Texas.

FOR FURTHER INFORMATION CONTACT: Joseph H. McGarvey, ACE-120C, Chicago Aircraft Certification Office, Federal Aviation Administration, 2300 East Devon Avenue, Des Plaines, IL 60018; telephone (312) 694-7136.

SUPPLEMENTARY INFORMATION: Airworthiness Directive AD 83-18-04, Amendment 39-4721 (48 FR 41756, September 19, 1983), currently requires repetitive inspections for wear and proper spline tooth contact, replacement as necessary, lubrication, and reassembly. After issuing AD 83-18-04, the FAA has determined that inadequate material hardness may contribute to excessive wear and that as a result of a recent strain survey, Enstrom splined coupling, part number (P/N) 28-13609-1, should no longer be inspected, lubricated, and returned to service without a service life limit. Therefore, the FAA is superseding AD 83-18-04 and replacing it with a new AD

which requires a one-time hardness check, repetitive inspections for wear, and replacement, if necessary, because of excessive wear or inadequate hardness. Further, those tail rotor drive shaft couplings having 1200 hours' time in service must be removed from service.

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and public procedure hereon are impracticable and good cause exists for making this amendment effective in less than 30 days.

The regulations adopted herein will not have substantial direct effects on States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

The FAA has determined that this regulation is an emergency regulation and that it is not considered to be major under Executive Order 12291. It is impracticable for the agency to follow the procedures of Executive Order 12291 with respect to this rule since the rule must be issued immediately to correct an unsafe condition in aircraft. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket (otherwise, an evaluation is not required). A copy of it, if filed, may be obtained from the Rules Docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR 39.13) as follows:

PART 39—[AMENDED]

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421 and 1423; 49 U.S.C. 106(g) (Revised Public Law 97-449, January 12, 1983); and 14 CFR 11.89.

§ 39.13—[Amended]

2. Section 39.13 is amended by adding the following new AD:

Enstrom Helicopter Corporation: Applies to all Enstrom Model F-28A, F-28C, F-28C-2, 280, and 280C series helicopters; to Model F-28F series helicopters with serial numbers (S/N's) 506, 507, 509, 510, 511, 512, 513, 514, 515, 517, 527, 700, 701, 702, and 704; and to Enstrom Model 280F series helicopter with S/N's 1212 and 1500. (Docket Number 83-ASW-39)

Compliance is required as indicated, unless already accomplished.

To prevent tail rotor drive shaft coupling failure that could result in loss of directional control and possible loss of the helicopter, accomplish the following:

(a) Within 5 hours' time in service after the effective date of this AD, determine if splined tail rotor drive shaft couplings, P/N 28-13009-1, are installed. Enter the part number of the tail rotor drive shaft couplings that are installed, the number of hours time in service, and the date in the log book.

Note: There are two tail rotor drive shaft coupling designs approved for use on Enstrom helicopters: (1) the splined coupling, P/N 28-13609-1, and, (2) the 7-plate flex pack coupling (Dana Corp. Element No. A005-1992).

(b) For splined couplings found to have P/N 28-13609-1—

(1) Before further flight, remove from service and replace with an airworthy coupling any splined coupling which has 1200 or more hours' time in service;

(2) Before further flight, disassemble the tail rotor drive shaft couplings with less than 1200 hours' time in service and accomplish the following:

(i) Visually and dimensionally inspect for wear and proper tooth contact in accordance with Figure 1. Measure the height of the spline crown shown in Figure 2 at the center with a steel scale (having graduations of 1/100 inch) and a 10 power glass. Replace with airworthy parts and couplings that have a center crown height of less than 0.015 inch.

(ii) Test both the male and female portions of the coupling for material hardness. Test the male portion on the inner circular face as shown in Figure 3. Test the end of the stud of the female portion as shown in Figure 4. Use three readings and average the readings.

Replace with airworthy parts any couplings which have average readings below 25 on the Rockwell "C" scale.

(iii) Magnetic particle inspect both portions of those couplings that have been installed on aircraft having a history of crash damage. Replace any couplings found to be cracked with airworthy parts.

(iv) Lubricate and reassemble couplings which meet the requirements of this paragraph before return to service.

Note: Enstrom Service Directive Bulletin 0065, Revision A, dated June 1, 1984, and the Maintenance Manual/Maintenance Manual Supplement for the respective models pertain to these procedures.

(3) At intervals not to exceed 100 hours' time in service after the initial inspection of paragraph (b)(2), partially disassemble the forward and aft tail rotor drive shaft couplings, P/N 28-13609-1. Repack the couplings with LE3752, Andok-B, Shell-14, Shell-16, or any grease meeting MIL-G-18709, prior to return to service;

Note: Enstrom Maintenance Manual, pages MM 3-5, MM 3-6, and MM 3-7 pertain to this procedure.

(4) Within 600 hours' time in service or at the next annual inspection, whichever occurs first after the initial inspections of paragraph (b)(2), and thereafter at each annual inspection, inspect and lubricate the forward and aft tail rotor drive shaft couplings in accordance with paragraphs (b)(2)(i) and (b)(2)(iv) of this AD; and

(5) Before reaching 1200 hours' time in service, replace with airworthy parts all couplings with P/N 28-13609-1.

(c) Rotorcraft that have Enstrom 7-plate flex pack couplings, P/N 28-01041-1, are exempt from the requirements of paragraph (b) of this AD.

(d) An alternate method of compliance, which provides an equivalent level of safety, may be used when approved by the Manager, Chicago Aircraft Certification Office, FAA, 2300 East Devon Avenue, room 232, Des Plaines, Illinois 60018.

(e) In accordance with sections 21.197 and 21.199, flight is permitted to a base where the maintenance required by this AD may be accomplished.

This amendment supersedes AD 83-18-04, Amendment 39-4721.

This amendment become effective on September 7, 1990.

Issued in Fort Worth, Texas on July 30, 1990.

Henry A. Armstrong,

*Acting Manager, Rotorcraft Directorate,
Aircraft Certification Service.*

BILLING CODE 4910-13-M



Figure 1. Checking inner spline wear on coupling.

NOTE: Tooth wear is measured by placing a 6 inch steel rule parallel to the crown at the top edge of the driven side. A piece of .125 x .010 inch shim stock is then placed between the tooth and the rule, and pressing the rule against the tooth, check if the shim can be removed. If the shim slips out, the coupling is to be rejected and replaced with an airworthy component.

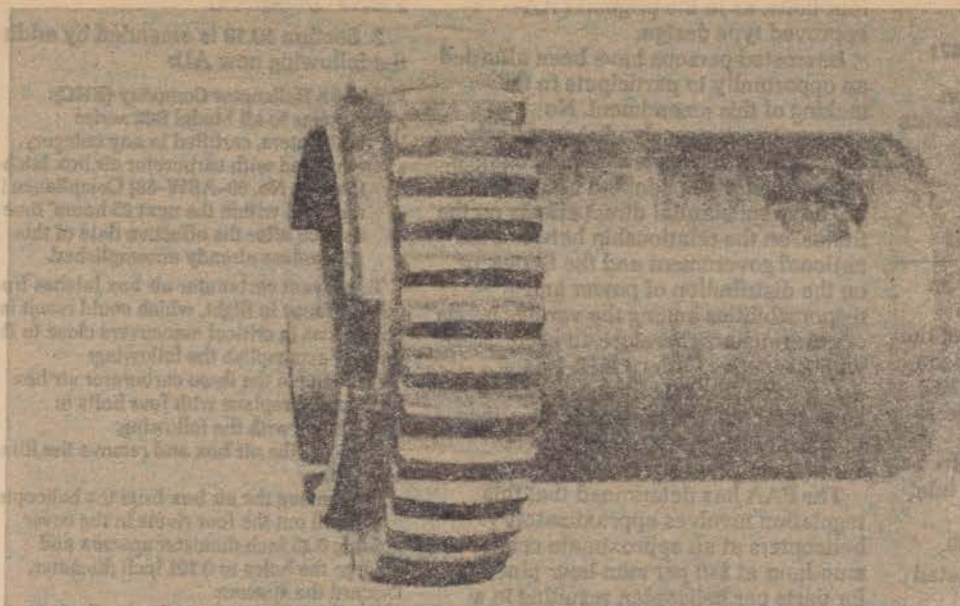


Figure 2. Checking outer spline wear on male coupling.



Figure 3.
Checking hardness on male
portion of coupling.



Figure 4.
Checking hardness on female
portion of coupling.

14 CFR Part 39

[Docket No. 89-ASW-58; Amdt. 39-6687]

Airworthiness Directives; Robinson Helicopter Company, Model R22 Series Helicopters**AGENCY:** Federal Aviation Administration (FAA), DOT.**ACTION:** Final rule.

SUMMARY: This amendment adopts an airworthiness directive (AD) which requires removal and replacement of the carburetor air box latches on Robinson Helicopter Company (RHC) Model R22 series helicopters. The AD is needed to prevent carburetor air box latches coming loose in flight with the result that air filters block the carburetor inlet and cause loss of engine power.

EFFECTIVE DATE: September 10, 1990.

ADDRESSES: The applicable AD-related information may be obtained from: Robinson Helicopter Company, 24747 Crenshaw Boulevard, Torrance, California 90505, or may be examined in the Regional Rules Docket, FAA, Office of Assistant Chief Counsel, room 158, Building 3B, 4400 Blue Mound Road, Fort Worth, Texas.

FOR FURTHER INFORMATION CONTACT:

Mr. Roy McKinnon, Aerospace Engineer, ANM-143L, FAA, Northwest Mountain Region, Los Angeles Aircraft Certification Office, 3229 E. Spring Street, Long Beach, California 90806-2425; telephone (213) 988-5247.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations to include an AD requiring removal of carburetor air box latches and replacement with bolts on Robinson Helicopter Company Model R22 Helicopters was published in the *Federal Register* on February 12, 1990 (55 FR 4850).

The proposal was prompted by reports of carburetor air box latches coming loose in flight and allowing the air filter to become dislodged which could cause loss of engine power and subsequent loss of the helicopter. RHC issued Service Bulletin No. 61, dated July 28, 1989, that provides instructions for removing the three carburetor air box latches and replacing them with

four bolts, as in the original FAA-approved type design.

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were received. Accordingly, the proposal is adopted without change.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

The FAA has determined that this regulation involves approximately 77 helicopters at an approximate cost of 1 man-hour at \$40 per man-hour plus \$6.00 for parts per helicopter, resulting in a total cost of \$46 per helicopter and \$3,542 for the fleet of affected aircraft. Therefore, I certify that this action: (1) Is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal; and (4) if promulgated, will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR 39.13) as follows:

PART 39—[AMENDED]

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421 and 1423; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); and 14 CFR 11.89.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new AD:

Robinson Helicopter Company (RHC):

Applies to all Model R22 series helicopters, certified in any category, equipped with carburetor air box latches. (Docket No. 89-ASW-58) Compliance is required within the next 25 hours' time in service after the effective date of this AD, unless already accomplished.

To prevent carburetor air box latches from coming loose in flight, which could result in power loss in critical maneuvers close to the ground, accomplish the following:

- (a) Remove the three carburetor air box latches and replace with four bolts in accordance with the following:
 - (1) Open the air box and remove the filter element.
 - (2) Remove the air box from the helicopter.
 - (3) Drill out the four rivets in the cover holding 0.25 inch diameter spacers and enlarge the holes to 0.191 inch diameter. Discard the spacers.
 - (4) Close the cover, and using the holes in the cover as guides, drill four matching holes through the upper box in line with the holes in the cover.
 - (5) Open the air box and drill out all the rivets holding the latches to the cover. Discard the latches and angles. Clean the drilling chips from the box.
 - (6) Reinstall the air box to the helicopter.
 - (7) Install the filter element and secure the cover using four AN3-35A bolts, AN960-10L washers, AN970-3 washers, and NAS679A3 nuts.

Note: Refer to Figure 1 for accomplishing the instructions required by paragraph (a).

(b) An alternate method of compliance or adjustment of the compliance time, which provides an equivalent level of safety, may be used if approved by the Manager, Los Angeles Aircraft Certification Office, ANM-100L, FAA, Northwest Mountain Region, 3229 E. Spring Street, Long Beach, California 90806-2425.

Note: Robinson Helicopter Company Service Bulletin #61, dated July 28, 1989, pertains to this AD.

This amendment becomes effective September 10, 1990.

Issued in Fort Worth, Texas, on July 30, 1990.

Henry A. Armstrong,

Acting Manager, Rotorcraft Directorate, Aircraft Certification Service.

BILLING CODE 4910-13-M

SB 61

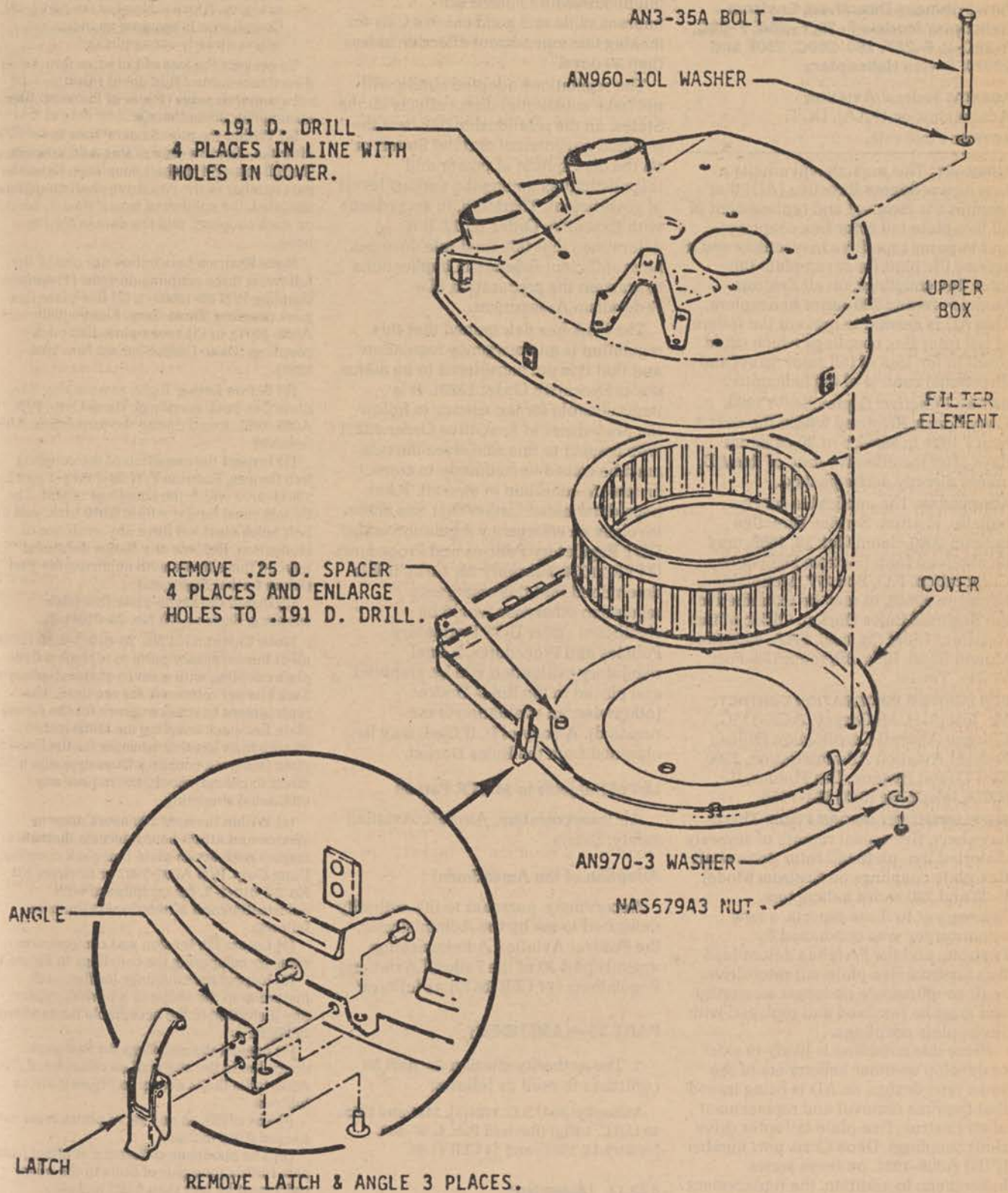


FIGURE 1

14 CFR Part 39

[Docket No. 90-ASW-28; Amdt. 39-6688]

Airworthiness Directives; Enstrom Helicopter Models F-28, F-28A, F-28C, F-28C-2, F-28F, 280, 280C, 280F and 280FX Series Helicopters**AGENCY:** Federal Aviation Administration (FAA), DOT.**ACTION:** Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that requires the removal and replacement of all five-plate tail rotor flex couplings, and imposes repetitive inspections and a service life limit for seven-plate tail rotor flex couplings, on all Enstrom Model F-28 and 280 series helicopters. This AD is needed to prevent the failure of tail rotor flex couplings which could result in the loss of tail rotor thrust and directional control of the helicopter.

DATES: Effective: September 7, 1990.

Compliance: Required within the next 5 hours' time in service or 30 calendar days after the effective date of this AD, unless already accomplished.

ADDRESSES: The applicable service bulletin, Enstrom Service Directive Bulletin 0080, dated Oct. 18, 1989, may be obtained from Enstrom Helicopter Corporation, P.O. Box 277, Menominee, Michigan 49858, or may be examined in the Regional Rules Docket, Office of the Assistant Chief Counsel, FAA, 4400 Blue Mound Road, Bldg. 3B, room 158, Fort Worth, Texas.

FOR FURTHER INFORMATION CONTACT:

Mr. Joseph H. McGarvey, ACE-115C, Chicago Aircraft Certification Office, Federal Aviation Administration, 2300 East Devon Avenue, Des Plaines, IL 60018; telephone (312) 694-7136.

SUPPLEMENTARY INFORMATION: There have been five recent reports of severely distorted five-plate tail rotor drive shaft flex-plate couplings on Enstrom Model F-28 and 280 series helicopters. Subsequent to these reports, a new strain survey was conducted by Enstrom, and the FAA has determined that Enstrom five-plate tail rotor drive shaft couplings are no longer airworthy and must be removed and replaced with seven-plate couplings.

Since this condition is likely to exist or develop on other helicopters of the same type design, an AD is being issued that requires removal and replacement of all Enstrom five-plate tail rotor drive shaft couplings, Dana Corp. part number (P/N) A005-1991, on these series helicopters; in addition, the replacement seven-plate tail rotor drive shaft couplings, Enstrom Kit No. 28-01041-1, will now have a 1,200 hour life limit.

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and public procedure hereon are impracticable and good cause exists for making this amendment effective in less than 30 days.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

The FAA has determined that this regulation is an emergency regulation and that it is not considered to be major under Executive Order 12291. It is impracticable for the agency to follow the procedures of Executive Order 12291 with respect to this rule since the rule must be issued immediately to correct an unsafe condition in aircraft. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket (otherwise, an evaluation is not required). A copy of it, if filed, may be obtained from the Rules Docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR 39.13) as follows:

PART 39—[AMENDED]

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421 and 1423; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); and 14 CFR 11.89.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new AD:

Enstrom Helicopter Corporation: Applies to Enstrom Model F-28, F-28A, F-28C, F-28C-2, F-28F, 280, 280C, 280F, and 280FX series helicopters, certificated in any category. (Docket Number 90-ASW-28) Compliance is required as indicated, unless already accomplished.

To prevent the loss of tail rotor thrust and directional control that could result in substantial damage or loss of the helicopter, accomplish the following:

(a) Within the next 5 hours' time in service after the effective date of this AD, inspect the tail rotor drive shaft couplings. Enter the part number of the two drive shaft couplings installed, the number of hours' time in service on each coupling, and the date in the log book.

Note: Enstrom helicopters use one of the following three coupling designs: (1) splined coupling P/N 28-13609-1, (2) five-plate flex pack coupling (Dana Corp. Element No. A005-1991); or (3) seven-plate flex pack coupling, (Dana Corp. Element No. A005-1992).

(b) Before further flight, remove any five-plate flex-pack couplings, Dana Corp. P/N A005-1991, found during the inspection. After removal:

(1) Inspect the condition of the coupling hub flanges, Enstrom P/N 28-13613-1 and 28-13614-1, to which the couplings mount. The flanges must be flat within 0.010-inch, and the bolt holes must not have any evidence of elongation. Replace any flange deformed beyond these limits with an airworthy part before further flight; and

(2) Install the seven-plate flex-pack coupling, Enstrom Kit No. 28-01041-1.

Note: Enstrom Kit No. 28-01041-1 includes all of the necessary parts to replace a five-plate coupling with a seven-plate coupling. Two kits per rotorcraft are required. The replacement beveled washers for the seven-plate flex-pack coupling are 0.010-inch thinner than beveled washers for the five-plate flex-pack coupling. Consequently, a direct exchange should not require any additional shimming.

(c) Within the next 100 hours' time in service and at 100-hour intervals thereafter, inspect each seven-plate flex-pack coupling, Dana Corp. P/N A005-1992 or Enstrom Kit No. 28-01041-1, for compliance with deformation and airworthiness limits as follows:

(1) Locate the tension and compression sides by comparing the couplings to Figure 1.

(2) Inspect the couplings for flex pack distortion in the shape of a bow. Compare any distortion to the acceptable limits shown in Figure 2.

(3) Inspect the couplings for flex pack distortion in the shape of an offset bend. The acceptable limits shown in Figure 3 are as follows:

(i) The offset on one set of plates must not exceed 0.015 inches.

(ii) The maximum difference in offset from side to side (one pair of bolts to the other pair) must be less than 0.007 inches.

(iii) The maximum allowable shim thickness is 0.072 inches (not including bevel washers).

Note: The replacement of the five plate coupling with the seven-plate coupling requires a thinner set of beveled washers which are included in Enstrom Kit Number 28-01041-1.

(4) Replace any seven-plate coupling, that either—

(i) Exceeds the airworthiness limits specified by paragraph (c); or,

(ii) Has accumulated 1,200 hours' time in service.

BILLING CODE 4910-13-M

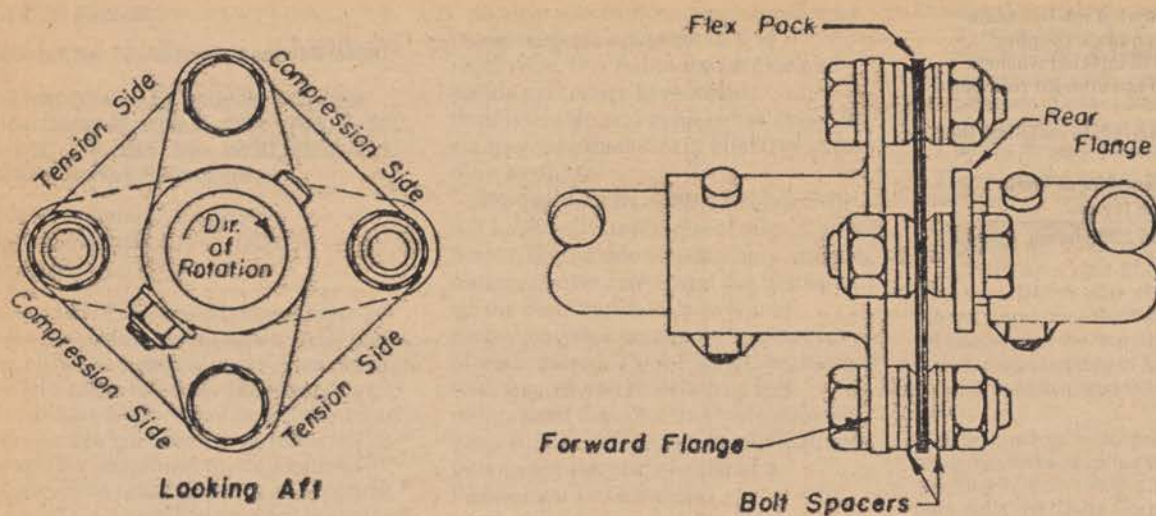
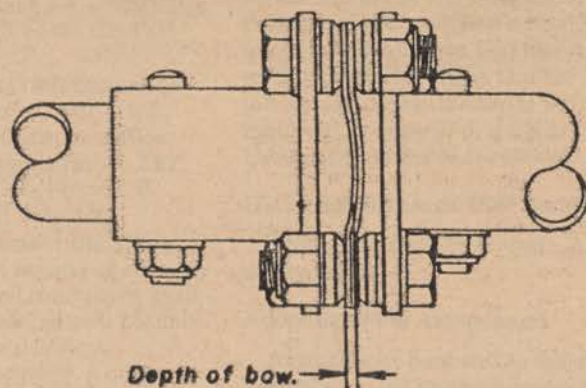


FIGURE 1

Tension Sides Versus Compression Sides

Tail Rotor Drive Shaft Coupling Installation.
Rear coupling shown; forward coupling similar.

NOTE: Tie-wraps eliminated for clarity.

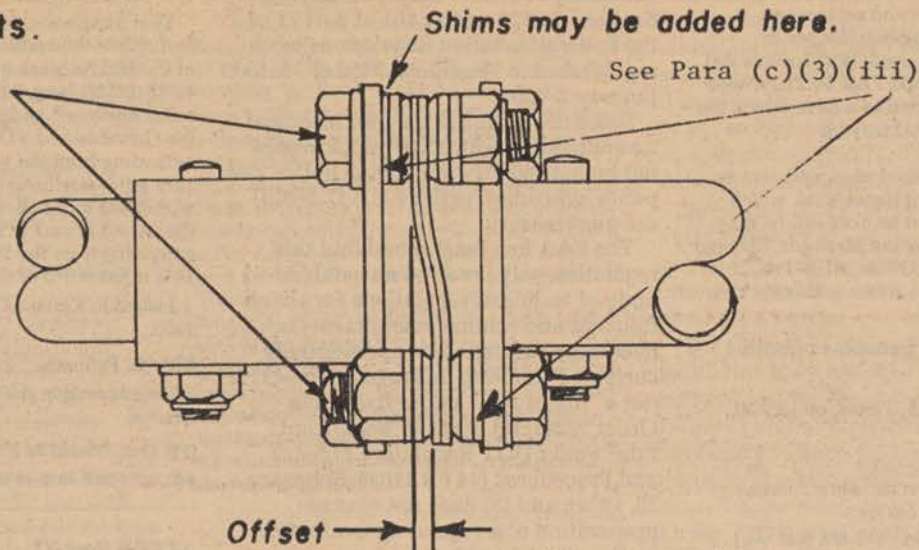


Depth of bow.
Must be less than .040" on compression
side and less than .020" on tension side.
Plates may be bowed in either direction.

Figure 2 - Acceptable Limits of Bowed Flex Packs.

NOTE: Tie-wraps eliminated for clarity.

One pair bolts.



Must be less than .015" on both sides (See Para (c)(3)(i))

When the flex pack is replaced,
shims may be added at the bolt spacers
as indicated to align the new flex pack.

Torque bolts to 75 in.lbs.

CAUTION: Do not add shims or washers between
the flex pack and the beveled washers.

Figure 3- Acceptable Limits of Flex Packs with Offset Bends.

NOTE: Tie-wraps eliminated for clarity.

(d) After removal of either seven-plate flex-pack coupling, inspect and replace, as necessary, the coupling hub flanges in accordance with paragraph (b)(1) of this AD.

(e) In accordance with FAR §§ 21.197 and 21.199, flight is permitted to a base where the requirements of this AD may be accomplished.

(f) An alternate method of compliance or adjustment of the compliance time, which provides an equivalent level of safety, may be used if approved by the Manager, Chicago Aircraft Certification Office, ACE-115C, FAA, 2300 East Devon Avenue, Des Plaines, Illinois 60018.

This amendment becomes effective September 7, 1990.

Issued in Fort Worth, Texas, on July 30, 1990.

Henry A. Armstrong,

Acting Manager, Rotorcraft Directorate,
Aircraft Certification Service.

[FR Doc. 90-18789 Filed 8-9-90; 8:45 am]

BILLING CODE 4910-13-M

14 CFR Part 71

[Airspace Docket Number 90-ACE-07]

Alteration of Control Zone and Transition Area; Grand Island, NE

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The nature of this Federal action is to alter the control zone and transition area descriptions at Grand Island, Nebraska. The Grand Island County Airport, Grand Island, Nebraska, has been renamed the Central Nebraska Regional Airport. Accordingly, the control zone and transition area descriptions are being altered to reflect this name change.

EFFECTIVE DATE: 0901 u.t.c., December 13, 1990.

FOR FURTHER INFORMATION CONTACT: Lewis G. Earp, Airspace Specialist, System Management Branch, Air Traffic Division, ACE-530, FAA, Central Region, 601 East 12th Street, Kansas City, Missouri 64106, Telephone (816) 426-3408.

SUPPLEMENTARY INFORMATION:

The Rule

The purpose of this amendment to subparts F and G of part 71 of the Federal Aviation Regulations (14 CFR part 71) is to alter the control zone and transition area descriptions at Grand Island, Nebraska. The Grand Island County Airport, Grand Island, Nebraska, has been renamed the Central Nebraska Regional Airport. Accordingly, alteration of the Grand Island control zone and transition area descriptions is

necessary to reflect this name change. Sections 71.171 and 71.181 of part 71 of the Federal Aviation Regulations were republished in Handbook 7400.6F, dated January 2, 1990.

Since this action is a minor technical amendment in which the public would not be particularly interested, notice and public procedure under 5 U.S.C. 553(b) are unnecessary.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. Therefore, this regulation—(1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 71

Aviation safety, Control zones, Transition areas.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me, part 71 of the Federal Aviation Regulations (14 CFR part 71) is amended as follows:

PART 71—DESIGNATION OF FEDERAL AIRWAYS, AREA LOW ROUTES, CONTROLLED AIRSPACE, AND REPORTING POINTS

1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 1348(a), 1354(a), 1510; Executive Order 10854; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); 14 CFR 11.69.

§ 71.171 [Amended]

2. Section 71.171 is amended as follows:

Grand Island, Nebraska [Revised]

Within a 5-mile radius of Central Nebraska Regional Airport (lat. 40°58'03" N., long. 98°18'30" W.); within 3 miles each side of the Grand Island VORTAC 303° radial, extending from the 5-mile radius zone to 8½ miles northwest of the VORTAC; and within 3 miles each side of the Grand Island VORTAC 390° radial, extending from the 5-mile radius zone to 8½ miles north of the VORTAC.

§ 71.181 [Amended]

3. Section 71.181 is amended as follows:

Grand Island, Nebraska [Revised]

That airspace extending upward from 700 feet above the surface within a 10-mile radius of Central Nebraska Regional Airport (lat. 40°58'03" N., long. 98°18'30" W.); within 4½ miles northeast and 9½ miles southwest of the Grand Island VORTAC 303° radial, extending from the 10-mile radius area to 18½ miles northwest of the VORTAC; and within 4½ miles east and 9½ miles west of the Grand Island VORTAC 390° radial, extending from the 10-mile radius area to 18½ miles north of the VORTAC.

Issued in Kansas City, Missouri, on July 27, 1990.

Billy G. Peacock,

Acting Manager, Air Traffic Division, Central Region.

[FR Doc. 90-18797 Filed 8-9-90; 8:45 am]

BILLING CODE 4910-13-M

14 CFR Part 71

[Airspace Docket No. 90-ACE-05]

Alteration of Control Zone and Transition Area; Topeka, KS

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The nature of this Federal action is to alter the control zone and transition area descriptions at Topeka, Kansas. The name of Forbes Field LOM has been changed to Ripley LOM. Accordingly, the control zone and transition area descriptions are being altered to reflect this name change.

EFFECTIVE DATE: 0901 u.t.c., December 13, 1990.

FOR FURTHER INFORMATION CONTACT: Lewis G. Earp, Airspace Specialist, System Management Branch, Air Traffic Division, ACE-530, FAA, Central Region, 601 East 12th Street, Kansas City, Missouri 64106, Telephone (816) 426-3408.

SUPPLEMENTARY INFORMATION:

The Rule

The purpose of this amendment to subparts F and G of part 71 of the Federal Aviation Regulations (14 CFR part 71) is to alter the control zone and transition area descriptions at Topeka, Kansas. The name of Forbes Field LOM has been changed to Ripley LOM. Accordingly, alteration of the Topeka control zone and transition area descriptions is necessary to reflect this name change.

Sections 71.171 and 71.181 of part 71 of the Federal Aviation Regulations

were republished in Handbook 7400.6F, dated January 2, 1990.

Since this action is a minor technical amendment in which the public would not be particularly interested, notice and public procedure under 5 U.S.C. 553(b) are unnecessary.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. Therefore, this regulation—(1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule, will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 71

Aviation safety, Control zones, and Transition area.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me, part 71 of the Federal Aviation Regulations (14 CFR part 71) is amended as follows:

PART 71—DESIGNATION OF FEDERAL AIRWAYS, AREA LOW ROUTES, CONTROLLED AIRSPACE, AND REPORTING POINTS

1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 1348(a), 1354(a), 1510; Executive Order 10854; 49 U.S.C. 106(g) (Revised Pub. L. 97-449), January 12, 1983; 14 CFR 11.69.

§ 71.171 [Amended]

2. Section 71.171 is amended as follows:

Topeka Forbes Field, Kansas [Revised]

Within a 5-mile radius of Forbes Field Airport (lat. 38°57'06" N., long. 95°39'45" W.); within 2.5 miles each side of the Ripley 317° bearing extending from the 5-mile radius zone to 6 miles northwest of the airport, and within 2 miles each side of the Forbes Field ILS localizer southeast course extending from the 5-mile radius zone to 1 mile southeast of the LOM, excluding the portion subtended by a chord drawn between the points of intersection of the 5-mile radius zone with the Topeka Philip Billard Airport, Kansas, control zone.

§ 71.181 [Amended]

3. Section 71.181 is amended as follows:

Topeka, Kansas [Revised]

That airspace extending upward from 700 feet above the surface within a 7-mile radius of Philip Billard Airport, Topeka, Kansas (lat. 39°04'09" N., 95°37'18" W.) within 2 miles each side of the Topeka VORTAC 039° radial extending from the 7-mile radius area to 8 miles northeast of the VORTAC, within 5 miles southwest and 8 miles northeast of the Philip Billard Airport ILS localizer northwest course extending from 3 miles southeast to 12 miles northwest of the Billard LOM, within an 8.5-mile radius of Forbes Field Airport, Topeka, Kansas (latitude 38°57'06" N., longitude 95°39'45" W.) within 4 miles each side of the Ripley LOM 317° bearing extending from the 8.5-mile radius area to 15 miles northwest of the airport, and within 3.5 miles each side of the Forbes Field ILS localizer southeast course extending from the 8.5 mile radius area to 8 miles southeast of the Ripley LOM.

Issued in Kansas City, Missouri, on July 27, 1990.

Billy G. Peacock,

Acting Manager, Air Traffic Division, Central Region.

[FR Doc. 90-18799 Filed 8-9-90; 8:45 am]

BILLING CODE 4910-13-M

14 CFR part 71

[Airspace Docket Number 90-ACE-11]

Alteration of Control Zone, Des Moines, IA

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The nature of this Federal action is to alter the control zone description at Des Moines, Iowa. The Des Moines Municipal Airport, Des Moines, Iowa, has been renamed Des Moines International Airport. Accordingly, the control zone description is being altered to reflect this name change.

EFFECTIVE DATES: 0901 u.t.c., December 13, 1990.

FOR FURTHER INFORMATION CONTACT:

Lewis G. Earp, Airspace Specialist, System Management Branch, Air Traffic Division, ACE-530, FAA, Central Region, 601 East 12th Street, Kansas City, Missouri 64106. Telephone (816) 426-3408.

SUPPLEMENTARY INFORMATION:

The Rule

The purpose of this amendment to subpart F of part 71 of the Federal Aviation Regulations (14 CFR 71.171) is to alter the control zone description at Des Moines, Iowa. The Des Moines Municipal Airport, Des Moines, Iowa,

has been renamed Des Moines International Airport. Accordingly, alteration of the Des Moines control zone description is necessary to reflect this name change. Section 71.171 of part 71 of the Federal Aviation Regulations was republished in Handbook 7400.6F, dated January 2, 1990.

Since this action is a minor technical amendment in which the public would not be particularly interested, notice and public procedure under 5 U.S.C. 553(b) are unnecessary.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. Therefore, this regulation—(1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 71

Aviation safety, Control zones.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me, part 71 of the Federal Aviation Regulations (14 CFR part 71) is amended as follows:

PART 71—DESIGNATION OF FEDERAL AIRWAYS, AREA LOW ROUTES, CONTROLLED AIRSPACE, AND REPORTING POINTS

1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 1348(a), 1354(a), 1510; Executive Order 10854; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); 14 CFR 11.69.

§ 71.171 [Amended]

2. Section 71.171 is amended as follows:

Des Moines, Iowa [Revised]

Within a 5-mile radius of Des Moines International Airport (lat. 41°32'10" N., long. 93°39'27" W.); and within 1 mile each side of the Des Moines ILS localizer northwest course, extending from the 5-mile radius zone to 11 1/2 miles northwest of the OM.

Issued in Kansas City, Missouri, on July 27, 1990.

Billy G. Peacock,

Acting Manager, Air Traffic Division, Central Region.

[FR Doc. 90-18795 Filed 8-9-90; 8:45 am]

BILLING CODE 4910-13-M

14 CFR Part 71

[Airspace Docket Number 90-ACE-12]

Alteration of Control Zone and Transition Area; Dubuque, IA

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The nature of this Federal action is to alter the control zone and transition area descriptions at Dubuque, Iowa. The Dubuque Municipal Airport, Dubuque, Iowa, has been renamed the Dubuque Regional Airport. Accordingly, the control zone and transition area descriptions are being altered to reflect this name change.

EFFECTIVE DATE: 0901 u.t.c., December 13, 1990.

FOR FURTHER INFORMATION CONTACT: Lewis G. Earp, Airspace Specialist, System Management Branch, Air Traffic Division, ACE-530, FAA, Central Region, 601 East 12th Street, Kansas City, Missouri 64106, Telephone (816) 426-3408.

SUPPLEMENTARY INFORMATION:

The Rule

The purpose of this amendment to subparts F and G of part 71 of the Federal Aviation Regulations (14 CFR part 71) is to alter the control zone and transition area descriptions at Dubuque, Iowa. The Dubuque Municipal Airport, Dubuque, Iowa, has been renamed the Dubuque Regional Airport. Accordingly, alteration of the Dubuque control zone and transition area descriptions is necessary to reflect this name change. Sections 71.171 and 71.181 of part 71 of the Federal Aviation Regulations were republished in Handbook 7400.6F, dated January 2, 1990.

Since this action is a minor technical amendment in which the public would not be particularly interested, notice and public procedure under 5 U.S.C. 553(b) are unnecessary.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. Therefore, this regulation—(1) is not a "major rule" under Executive Order 12291; (2) is not a "significant

rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 71

Aviation safety, control zones and transition areas.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me, part 71 of the Federal Aviation Regulations (14 CFR part 71) is amended as follows:

PART 71—DESIGNATION OF FEDERAL AIRWAYS, AREA LOW ROUTES, CONTROLLED AIRSPACE, AND REPORTING POINTS

1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 1348(a), 1354(a), 1510; Executive Order 10854; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); 14 CFR 11.69.

§ 71.171 [Amended]

2. Section 71.171 is amended as follows:

Dubuque, Iowa [Revised]

Within a 5-mile radius of Dubuque Regional Airport (lat. 42°24'10" N., long. 90°42'25" W.); within 3 miles each side of the Dubuque VORTAC 321° radial, extending from the 5-mile radius zone to 8 miles northwest of the VORTAC; and within 3 miles each side of the Dubuque VORTAC 126° radial, extending from the 5-mile radius zone to 8 miles southeast of the VORTAC; within 3 miles each side of the Dubuque VORTAC 182° radial, extending from the 5-mile radius zone to 8 miles south of the VORTAC. This control zone is effective during the specific dates and times established in advance by a Notice to Airmen. The effective date and time will thereafter be continuously published in the Airport/Facility Directory.

§ 71.181 [Amended]

3. Section 71.181 is amended as follows:

Dubuque, Iowa [Revised]

That airspace extending upward from 700 feet above the surface within an 8½-mile radius of the Dubuque Regional Airport (lat. 42°24'10" N., long. 90°42'32" W.); and within 3 miles on either side of the Dubuque VORTAC 321° radial, extending from the VORTAC to 8 miles northwest of the airport reference point; and within 3½ miles on either side of the Dubuque VORTAC 131° radial, extending

from the VORTAC to 15½ miles southeast of the airport reference point.

Issued in Kansas City, Missouri, on July 27, 1990.

Billy G. Peacock,

Acting Manager, Air Traffic Division, Central Region.

[FR Doc. 90-18794 Filed 8-9-90; 8:45 am]

BILLING CODE 4910-13-M

14 CFR Part 71

[Airspace Docket Number 90-ACE-13]

Alteration of Control Zone; Ottumwa, IA

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The nature of this Federal action is to alter the control zone description at Ottumwa, Iowa. The Ottumwa Municipal Airport, Ottumwa, Iowa, has been renamed Ottumwa Industrial Airport. Accordingly, the control zone description is being altered to reflect this name change.

EFFECTIVE DATE: 0901 u.t.c., December 13, 1990.

FOR FURTHER INFORMATION CONTACT: Lewis G. Earp, Airspace Specialist, System Management Branch, Air Traffic Division, ACE-530, FAA, Central Region, 601 East 12th Street, Kansas City, Missouri 64106, Telephone (816) 426-3408.

SUPPLEMENTARY INFORMATION:

The Rule

The purpose of this amendment to subpart F of part 71 of the Federal Aviation Regulations (14 CFR 71.171) is to alter the control zone description at Ottumwa, Iowa. The Ottumwa Municipal Airport, Ottumwa, Iowa, has been renamed Ottumwa Industrial Airport. Accordingly, alteration of the Ottumwa control zone description is necessary to reflect this name change. Section 71.171 of part 71 of the Federal Aviation Regulations was republished in Handbook 7400.6F, dated January 2, 1990.

Since this action is a minor technical amendment in which the public would not be particularly interested, notice and public procedure under 5 U.S.C. 553(b) are unnecessary.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. Therefore, this regulation—(1) is not a "major rule" under Executive

Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 71

Aviation safety, Control zones.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me, part 71 of the Federal Aviation Regulations (14 CFR part 71) is amended as follows:

PART 71—DESIGNATION OF FEDERAL AIRWAYS, AREA LOW ROUTES, CONTROLLED AIRSPACE, AND REPORTING POINTS

1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 1348(a), 1354(a), 1510; Executive Order 10854; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); 14 CFR 11.69.

§ 71.171 [Amended]

2. Section 71.171 is amended as follows:

Ottumwa, Iowa [Revised]

Within a 5-mile radius of Ottumwa Industrial Airport (lat. 41°06'25" N., long. 92°26'50" W.); and within 2 miles either side of the Ottumwa VORTAC 309° radial extending from the 5-mile radius zone to the VORTAC.

Issued in Kansas City, Missouri, on July 27, 1990.

Billy G. Peacock,

Acting Manager, Air Traffic Division, Central Region.

[FR Doc. 90-18793 Filed 8-9-90; 8:45 am]

BILLING CODE 4910-13-M

14 CFR Part 71

[Airspace Docket No. 90-ACE-14]

Alteration of Control Zone; Sioux City, IA

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The nature of this Federal action is to alter the control zone description at Sioux City, Iowa. The Sioux City Municipal Airport, Sioux City, Iowa, has been renamed Sioux Gateway Airport. Accordingly, the

control zone description is being altered to reflect this name change.

EFFECTIVE DATE: 0901 u.t.c., December 13, 1990.

FOR FURTHER INFORMATION CONTACT:

Lewis G. Earp, Airspace Specialist, System Management Branch, Air Traffic Division, ACE-530, FAA, Central Region, 601 East 12th Street, Kansas City, Missouri 64106, Telephone (816) 426-3408.

SUPPLEMENTARY INFORMATION:

The Rule

The purpose of this amendment to subpart F of part 71 of the Federal Aviation Regulations (14 CFR 71.171) is to alter the control zone description at Sioux City, Iowa. The Sioux City Municipal Airport, Sioux City, Iowa, has been renamed Sioux Gateway Airport. Accordingly, alteration of the Sioux City control zone description is necessary to reflect this name change. Section 71.171 of part 71 of the Federal Aviation Regulations was republished in Handbook 7400.6F, dated January 2, 1990.

Since this action is a minor technical amendment in which the public would not be particularly interested, notice and public procedure under 5 U.S.C. 553(b) are unnecessary.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. Therefore, this regulation—(1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 71

Aviation safety, Control zones.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me, part 71 of the Federal Aviation Regulations (14 CFR part 71) is amended as follows:

PART 71—DESIGNATION OF FEDERAL AIRWAYS, AREA LOW ROUTES, CONTROLLED AIRSPACE, AND REPORTING POINTS

1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 1348(a), 1354(a), 1510; Executive Order 10854; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); 14 CFR 11.69.

§ 71.171 [Amended]

2. Section 71.171 is amended as follows:

Sioux City, Iowa [Revised]

Within a 5-mile radius of Sioux Gateway Airport (lat. 42°24'03" N., long. 96°22'55" W.); and within 2½ miles each side of the Sioux City VORTAC 140° radial, extending from the 5-mile radius zone to 6 miles southeast of the VORTAC. This control zone is effective during the specific dates and times established in advance by a Notice to Airmen. The effective date and time will thereafter be continuously published in the Airport/Facility Directory.

Issued in Kansas City, Missouri, on July 27, 1990.

Billy G. Peacock,

Acting Manager, Air Traffic Division, Central Region.

[FR Doc. 90-18792 Filed 8-9-90; 8:45 am]

BILLING CODE 4910-13-M

14 CFR Part 71

[Airspace Docket Number 90-ACE-09]

Alteration of Control Zone; Scottsbluff, NE

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The nature of this Federal action is to alter the control zone description at Scottsbluff, Nebraska. The Scottsbluff County Airport, Scottsbluff, Nebraska, has been renamed William B. Heilig Field. Accordingly, the control zone description is being altered to reflect this name change.

EFFECTIVE DATE: 0901 U.T.C., December 13, 1990.

FOR FURTHER INFORMATION CONTACT:

Lewis G. Earp, Airspace Specialist, System Management Branch, Air Traffic Division, ACE-530, FAA, Central Region, 601 East 12th Street, Kansas City, Missouri 64106, Telephone (816) 426-3408.

SUPPLEMENTARY INFORMATION:**The Rule**

The purpose of this amendment to subpart F of part 71 of the Federal Aviation Regulations (14 CFR 71.171) is to alter the control zone description at Scottsbluff, Nebraska. The Scottsbluff County Airport, Scottsbluff, Nebraska, has been renamed William B. Heilig Field. Accordingly, alteration of the Scottsbluff control zone description is necessary to reflect this name change. Section 71.171 of part 71 of the Federal Aviation Regulations was republished in Handbook 7400.6F, dated January 2, 1990.

Since this action is a minor technical amendment in which the public would not be particularly interested, notice and public procedure under 5 U.S.C. 553(b) are unnecessary.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. Therefore, this regulation—(1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 71

Aviation safety, Control zones.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me, part 71 of the Federal Aviation Regulations (14 CFR part 71) is amended as follows:

PART 71—DESIGNATION OF FEDERAL AIRWAYS, AREA LOW ROUTES, CONTROLLED AIRSPACE, AND REPORTING POINTS

1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 1348(a), 1354(a), 1510; Executive Order 10854; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); 14 CFR 11.69.

§ 71.171 [Amended]

2. Section 71.171 is amended as follows:

Scottsbluff, Nebraska [Revised]

Within a 5-mile radius of William B. Heilig Field Airport (lat. 41°52'40"N., long. 103°35'47"W.); and within 2 miles

each side of the Scottsbluff VORTAC 259° radial extending from the 5-mile radius zone to the VORTAC; and within 2 miles each side of the ILS localizer northwest course extending from the 5-mile radius zone to 7 miles northwest of the airport; and within 4.5 miles each side of the Scottsbluff VORTAC 256° radial extending from the 5-mile radius zone to 15.5 miles west of the VORTAC.

Issued in Kansas City, Missouri, on July 27, 1990.

Billy G. Peacock,

Acting Manager, Air Traffic Division Central Region.

[FR Doc. 90-18796 Filed 8-9-90; 8:45 am]

BILLING CODE 4910-13-M

14 CFR Part 71

[Airspace Docket No. 90-ACE-06]

Alteration of Control Zone—Wichita, KS

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The nature of this Federal action is to alter the control zone description at Wichita, Kansas. The Wichita Municipal Airport, Wichita, Kansas, has been renamed Wichita Mid-Continent Airport. Accordingly, the control zone description is being altered to reflect this name change.

EFFECTIVE DATE: 0901 u.t.c., December 13, 1990.

FOR FURTHER INFORMATION CONTACT:

Lewis G. Earp, Airspace Specialist, System Management Branch, Air Traffic Division, ACE-530, FAA, Central Region, 601 East 12th Street, Kansas City, Missouri 64106, Telephone (816) 426-3408.

SUPPLEMENTARY INFORMATION:**The Rule**

The purpose of this amendment to subpart F of part 71 of the Federal Aviation Regulations (14 CFR 71.171) is to alter the control zone description at Wichita, Kansas. The Wichita Municipal Airport, Wichita, Kansas, has been renamed Wichita Mid-Continent Airport. Accordingly, alteration of the Wichita control zone description is necessary to reflect this name change. Section 71.171 of part 71 of the Federal Aviation Regulations was republished in Handbook 7400.6F, dated January 2, 1990.

Since this action is a minor technical amendment in which the public would not be particularly interested, notice and public procedure under 5 U.S.C. 553(b) are unnecessary.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. Therefore, this regulation—(1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 71

Aviation safety, control zones.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me, part 71 of the Federal Aviation Regulations (14 CFR part 71) is amended as follows:

PART 71—DESIGNATION OF FEDERAL AIRWAYS, AREA LOW ROUTES, CONTROLLED AIRSPACE, AND REPORTING POINTS

1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 1348(a), 1354(a), 1510; E.O. 10854; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); 14 CFR 11.69.

§ 71.171 [Amended]

2. Section 71.171 is amended as follows:

Wichita Mid-Continent Airport, Kansas [Revised]

Within a 5-mile radius of the Wichita, Kansas, Mid-Continent Airport (lat. 37°39'09"N., long. 97°25'47"W.); and within 2 miles each side of the Wichita Mid-Continent Airport ILS localizer north course, extending to 7.5 miles north, excluding that portion subtended by a chord drawn between the points of INT of the 5-mile radius zone of the Wichita McConnell AFB, Kansas, 5-mile radius control zone.

Issued in Kansas City, Missouri, on July 27, 1990.

Billy G. Peacock,

Acting Manager, Air Traffic Division, Central Region.

[FR Doc. 90-18798 Filed 8-9-90; 8:45 am]

BILLING CODE 4910-13-M

14 CFR Part 71**[Airspace Docket No. 90-ACE-04]****Alteration of Control Zone and Transition Area—Dodge City, KS****AGENCY:** Federal Aviation Administration (FAA), DOT.**ACTION:** Final rule.

SUMMARY: The nature of this Federal action is to alter the control zone and transition area descriptions at Dodge City, Kansas. The Dodge City Municipal Airport, Dodge City, Kansas, has been renamed the Dodge City Regional Airport. Accordingly, the control zone and transition area descriptions are being altered to reflect this name change.

EFFECTIVE DATES: 0901 u.t.c., December 13, 1990.

FOR FURTHER INFORMATION CONTACT: Lewis G. Earp, Airspace Specialist, System Management Branch, Air Traffic, Division, ACE-530, FAA, Central Region, 601 East 12th Street, Kansas City, Missouri 64106, Telephone (816) 426-3408.

SUPPLEMENTARY INFORMATION:**The Rule**

The purpose of the amendment to subparts F and G of part 71 of the Federal Aviation Regulations (14 CFR part 71) is to alter the control zone and transition area description at Dodge City, Kansas. The Dodge City Municipal Airport, Dodge City, Kansas, has been renamed the Dodge City Regional Airport. Accordingly, alteration of the Dodge City control zone and transition area descriptions is necessary to reflect this name change. Sections 71.171 and 71.181 of part 71 of the Federal Aviation Regulations were republished in handbook 7400.6F, dated January 2, 1990.

Since this action is a minor technical amendment in which the public would not be particularly interested, notice and public procedure under 5 U.S.C. 553(b) are unnecessary.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. Therefore, this regulation—(1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air

navigation, it is certified that this rule will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 71

Aviation safety, control zones and transition areas.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me, part 71 of the Federal Aviation Regulations (14 CFR part 71) is amended as follows:

PART 71—DESIGNATION OF FEDERAL AIRWAYS, AREA LOW ROUTES, CONTROLLED AIRSPACE AND REPORTING POINTS

1. The authority citation for part 71 continues to read as follows:

Authority: 49 U.S.C. 1348(a), 1354(a), 1510; Executive Order 10854; 4 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); 14 CFR 11.69.

§ 71.171 [Amended]

2. Section 71.171 is amended as follows:

Dodge City, Kansas [Revised]

Within a 5-mile radius of Dodge City Regional Airport (lat. 37°45'42" N., long. 99°57'51" W.).

§ 71.181 [Amended]

3. Section 71.181 is amended as follows:

Dodge City, Kansas [Revised]

That airspace extending upward from 700 feet above the surface within a 9.5 mile radius of the Dodge City Municipal Airport (lat. 37°45'42" N., long. 99°57'51" W.).

Issued in Kansas City, Missouri, on July 27, 1990.

Billy G. Peacock,

Acting Manager, Air Traffic Division, Central Region.

[FR Doc. 90-18800 Filed 8-9-90; 8:45 am]

BILLING CODE 4910-13-M

14 CFR Part 97**[Docket No. 26306; Amdt. 1432]****Standard Instrument Approach Procedures; Miscellaneous Amendments****AGENCY:** Federal Aviation Administration (FAA), DOT.**ACTION:** Final rule.

SUMMARY: This amendment establishes, amends, suspends, or revokes Standard Instrument Approach Procedures (SIAPs) for operations at certain airports. These regulatory actions are

needed because of the adoption of new or revised criteria, or because of changes occurring in the National Airspace System, such as the commissioning of new navigational facilities, addition of new obstacles, or changes in air traffic requirements. These changes are designed to provide safe and efficient use of the navigable airspace and to promote safe flight operations under instrument flight rules at the affected airports.

EFFECTIVE DATES: An effective date for each SIAP is specified in the amendatory provisions.

Incorporation by reference—approved by the Director of the Federal Register on December 31, 1980, and reapproved as of January 1, 1982.

ADDRESSES: Availability of matters incorporated by reference in the amendment is as follows:

For Examination

1. FAA Rules Docket, FAA Headquarters Building, 800 Independence Avenue, SW., Washington, DC 20591;

2. The FAA Regional Office of the region in which the affected airport is located; or

3. The Flight Inspection Field Office which originated the SIAP.

For Purchase

Individual SIAP copies may be obtained from:

1. FAA Public Inquiry Center (APA-200), FAA Headquarters Building, 800 Independence Avenue, SW., Washington, DC 20591; or

2. The FAA Regional Office of the region in which the affected airport is located.

By Subscription

Copies of all SIAPs, mailed once every 2 weeks, are for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

FOR FURTHER INFORMATION CONTACT: Paul J. Best, Flight Procedures Standards Branch (AFS-420), Technical Programs Division, Flight Standards Service, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267-8277.

SUPPLEMENTARY INFORMATION: This amendment to part 97 of the Federal Aviation Regulations (14 CFR part 97) establishes, amends, suspends, or revokes Standard Instrument Approach Procedures (SIAPs). The complete regulatory description of each SIAP is contained in official FAA form

documents which are incorporated by reference in this amendment under 5 U.S.C. 552(a), 1 CFR part 51, and § 97.20 of the Federal Aviation Regulations (FAR). The applicable FAA Forms are identified as FAA Forms 8260-3, 8260-4, and 8260-5. Materials incorporated by reference are available for examination or purchase as stated above.

The large number of SIAPs, their complex nature, and the need for a special format make their verbatim publication in the Federal Register expensive and impractical. Further, airmen do not use the regulatory text of the SIAPs, but refer to their graphic depiction on charts printed by publishers of aeronautical materials. Thus, the advantages of incorporation by reference are realized and publication of the complete description of each SIAP contained in FAA form documents is unnecessary. The provisions of this amendment state the affected CFR (and FAR) sections, with the types and effective dates of the SIAPs. This amendment also identifies the airport, its location, the procedure identification and the amendment number.

This amendment to part 97 is effective on the date of publication and contains separate SIAPs which have compliance dates stated as effective dates based on related changes in the National Airspace System or the application of new or revised criteria. Some SIAP amendments may have been previously issued by the FAA in a National Flight Data Center (FDC) Notice to Airmen (NOTAM) as an emergency action of immediate flight safety relating directly to published aeronautical charts. The circumstances which created the need for some SIAP amendments may require making them effective in less than 30 days. For the remaining SIAPs, an effective date at least 30 days after publication is provided.

Further, the SIAPs contained in this amendment are based on the criteria contained in the U.S. Standard for Terminal Instrument Approach Procedures (TERPs). In developing these SIAPs, the TERPs criteria were applied to the conditions existing or anticipated at the affected airports. Because of the close and immediate relationship between these SIAPs and safety in air commerce, I find that notice and public procedure before adopting these SIAPs are unnecessary, impracticable, and contrary to the public interest and, where applicable, that good cause exists for making some SIAPs effective in less than 30 days.

The FAA has determined that this regulation only involves an established body of technical regulations for which

frequent and routine amendments are necessary to keep them operationally current. It, therefore—(1) Is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. For the same reason, the FAA certifies that this amendment will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 97

Approaches, Standard instrument, Incorporation by reference.

Issued in Washington, DC on August 3, 1990.

Daniel C. Beaudette,

Director, Flight Standards Service.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me, part 97 of the Federal Aviation Regulations (14 CFR part 97) is amended by establishing, amending, suspending, or revoking Standard Instrument Approach Procedures, effective at 0901 G.m.t. on the dates specified as follows:

PART 97—[AMENDED]

1. The authority citation for part 97 continues to read as follows:

Authority: 49 U.S.C. 1348, 1354(a), 1421 and 1510; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983; and 14 CFR 11.49(b)(2).

2. Part 97 is amended as follows:

§§ 97.23, 97.25, 97.27, 97.29, 97.31, 97.33, and 97.35 [Amended]

By amending: § 97.23 VOR, VOR/DME, VOR or TACAN, and VOR/DME or TACAN; § 97.25 LOC, LOC/DME, LDA, LDA/DME, SDF, SDF/DME; § 97.27 NDB, NB/DME; § 97.29 ILS, ILS/DME, ISMLS, MLS, MLS/DME, MLS/ RNAV; § 97.31 RADAR SIAPs; § 97.33 RNAV SIAPs; and § 97.35 COPTER SIAPs, identified as follows:

Effective October 18, 1990

Montgomery, AL—Dannelly Field, VOR-A, Amdt. 3
Montgomery, AL—Dannelly Field, NDB Rwy 9, Amdt. 17
Montgomery, AL—Dannelly Field, ILS Rwy 9, Amdt. 22
Montgomery, AL—Dannelly Field, ILS Rwy 27, Amdt. 7
Montgomery, AL—Dannelly Field, RADAR-1, Amdt. 7
Montgomery, AL—Dannelly Field, RNAV Rwy 3, Amdt. 5
Cold Bay, AK—Cold Bay, VORTAC-A, Amdt. 3, CANCELLED

Cold Bay, AK—Cold Bay, VOR/DME or TACAN-A, Original
Cold Bay, AK—Cold Bay, VOR Rwy 14, Amdt. 11
Cold Bay, AK—Cold Bay, LOC/DME BC Rwy 32, Amdt. 5
Cold Bay, AK—Cold Bay, NDB Rwy 14, Amdt. 10
Cold Bay, AK—Cold Bay, ILS Rwy 14, Amdt. 13
Grand Canyon, AZ—Grand Canyon National Park, ILS/DME Rwy 3, Amdt. 3
Van Nuys, CA—Van Nuys, VOR-A, Amdt. 2
Van Nuys, CA—Van Nuys, VOR/DME-B, Amdt. 2
Van Nuys, CA—Van Nuys, LDA-C, Amdt. 2
Van Nuys, CA—Van Nuys, ILS Rwy 16R, Amdt. 4
Kahului, HI—Kahului, ILS Rwy 2, Amdt. 20
Gordon, NE—Gordon Muni, NDB Rwy 22, Amdt. 2
Oshkosh, NE—Garden County, NDB Rwy 12, Amdt. 4
Greenville, NC—Pitt-Greenville, NDB Rwy 19, Amdt. 13
Greenville, NC—Pitt-Greenville, ILS Rwy 19, Amdt. 2
Greenville, NC—Pitt-Greenville, RNAV Rwy 25, Amdt. 3
Enid, OK—Enid Woodring Muni, VOR Rwy 17, Amdt. 10
Enid, OK—Enid Woodring Muni, VOR Rwy 35, Amdt. 11
Enid, OK—Enid Woodring Muni, NDB Rwy 35, Amdt. 4
Enid, OK—Enid Woodring Muni, ILS Rwy 35, Amdt. 2
Mineola/Quitman, TX—Mineola-Quitman, VOR/DME-B, Amdt. 1
Mineola/Quitman, TX—Mineola-Quitman, RNAV Rwy 18, Amdt. 1
New Braunfels, TX—New Braunfels Muni, VOR/DME-A, Amdt. 7
New Braunfels, TX—New Braunfels Muni, RNAV Rwy 13, Amdt. 1
New Braunfels, TX—New Braunfels Muni, RNAV Rwy 31, Amdt. 1
Waco, TX—TSTI-Waco, NDB Rwy 17L, Amdt. 8
Waco, TX—TSTI-Waco, NDB Rwy 35R, Amdt. 9
Waco, TX—TSTI-Waco, ILS Rwy 17L, Amdt. 10
Norfolk, VA—Norfolk INTL, VOR/DME Rwy 5, Amdt. 4
Norfolk, VA—Norfolk INTL, VOR/DME Rwy 14, Amdt. 2
Norfolk, VA—Norfolk INTL, VOR Rwy 23, Amdt. 8
Norfolk, VA—Norfolk INTL, ILS Rwy 5, Amdt. 23
Norfolk, VA—Norfolk INTL, ILS Rwy 23, Amdt. 6
Pullman/Moscow, ID, WA—Pullman/Moscow Regional, VOR Rwy 5, Amdt. 6

Effective September 20, 1990

Bakersfield, CA—Meadows Field, VOR Rwy 12L, Amdt. 6
Bakersfield, CA—Meadows Field, LOC BC Rwy 12L, Amdt. 10
Camarillo, CA—Camarillo, VOR Rwy 26, Amdt. 1
Delano, CA—Delano Muni, VOR Rwy 32L, Amdt. 5

NAPA, CA—Napa County, VOR Rwy 6, Amdt. 11
 NAPA, CA—Napa County, LOC Rwy 36L, Amdt. 2
 Fort Lauderdale, FL—Lauderdale/Hollywood INTL, VOR Rwy 27R, Amdt. 9
 Augusta, GA—Daniel Field, NDB Rwy 10, Amdt. 2
 Indianapolis, IN—Indianapolis INTL, RADAR-1, Amdt. 28
 Winterset, IA—Winterset-Madison County, VOR/DME-A, Original
 Elizabethtown, KY—Addington Field, VOR-A, Amdt. 2
 Elizabethtown, KY—Addington Field, RNAV Rwy 5, Amdt. 2
 Flint, MI—Bishop International, VOR Rwy 18, Amdt. 18
 Flint, MI—Bishop International, VOR Rwy 27, Amdt. 20
 Flint, MI—Bishop International, ILS Rwy 9, Amdt. 21
 North Platte, NE—Lee Bird Field, NDB Rwy 30L, Amdt. 9
 North Platte, NE—Lee Bird Field, NDB Rwy 30R, Amdt. 3
 North Platte, NE—Lee Bird Field, RNAV Rwy 12L, Amdt. 3
 Theford, NE—Thomas County, VOR Rwy 8, Amdt. 4
 Atlantic City, NJ—Atlantic City Muni/Bader Field, VOR-B, Original
 Wildwood, NJ—Cape May County, VOR Rwy 23, Amdt. 9, CANCELLED
 Rochester, NY—Greater Rochester International, ILS Rwy 4, Amdt. 16
 Wilmington, NC—New Hanover County, RADAR-1, Amdt. 4
 Cincinnati, OH—Cincinnati Muni Airport-Lunken Field, LOC BC Rwy 2R, Amdt. 7
 Cincinnati, OH—Cincinnati Muni Airport-Lunken Field, NDB Rwy 20L, Amdt. 11
 Cincinnati, OH—Cincinnati Muni Airport-Lunken Field, ILS Rwy 20L, Amdt. 14
 Wadsworth, OH—Wadsworth Muni, NDB Rwy 2, Amdt. 3
 Wooster, OH—Wayne County, NDB Rwy 27, Amdt. 5
 Zanesville, OH—Zanesville Muni, VOR/DME Rwy 4, Amdt. 1
 Carlisle, PA—Carlisle, VOR/DME-A, Amdt. 1
 East Stroudsburg, PA—Stroudsburg-Pocono, VOR/DME-A, Amdt. 4
 Langhorne, PA—Buehl Field, VOR Rwy 6, Amdt. 6
 Beeville, TX—Beeville Muni, VOR/DME Rwy 12, Amdt. 4
 Beeville, TX—Beeville Muni, NDB Rwy 30, Amdt. 2
 Brady, TX—Curtis Field, NDB Rwy 17, Amdt. 1
 Kerrville, TX—Kerrville Muni/Louis Schreiner Field, VOR-A, Amdt. 1
 Kerrville, TX—Kerrville Muni/Louis Schreiner Field, LOC Rwy 30, Amdt. 2
 Kerrville, TX—Kerrville Muni/Louis Schreiner Field, NDB Rwy 30, Amdt. 2
 Kerrville, TX—Kerrville Muni/Louis Schreiner Field, RNAV Rwy 12, Amdt. 1
 Lago Vista, TX—Lago Vista Bar-K Airport, VOR/DME-A, Amdt. 2
 Liberty, TX—Liberty Muni, VOR-A, Amdt. 4
 Mineola, TX—Mineola Wisener Field, VOR/DME-A, Amdt. 3
 Paris, TX—Cox Field, VOR/DME Rwy 35, Amdt. 9

Burlington, VT—Burlington Intl, NDB Rwy 15, Amdt. 18

Effective August 23, 1990

Eagle, CO—Eagle County Regional, LOC-B, Orig.
 Eagle, CO—Eagle County Regional, LOC/DME-C, Orig.
 Eagle, CO—Eagle County Regional, LDA-B, Orig., CANCELLED
 Eagle, CO—Eagle County Regional, LDA/DME-A, Amdt. 4, CANCELLED
 Windsor Locks, CT—Bradley Intl, VOR Rwy 24, Orig.

Effective July 20, 1990

Paso Robles, CA—Paso Robles Muni, VOR/DME Rwy 19, Amdt. 2
 Lubbock, TX—Lubbock Intl, LOC BC Rwy 35L, Amdt. 15
 Baton Rouge, LA—Baton Rouge Metropolitan/Ryan Field, RADAR-1, Amdt. 9

Note: Change the effective date of the following Takeoff Procedure to 23 Aug 90:

Kaunakakai, Molokai, HI, Amdt. 4

Note: Change the following Takeoff Procedure at Tulsa Intl, Tulsa, OK, Amdt. 3 dtd 23 Aug 90 to read:

Takeoff Minimums: RWY 8, 26, 17L, 35R, 35L—Standard. RWY 17R—200-1 or STANDARD with minimum climb of 210 ft/NM to 900'.

IFR Departure Procedure: comply with SID or as cleared.

Note at end of section 97.27.

The FAA published an Amendment in Docket No. 26291, Amdt. No. 1431 to part 97 of the Federal Aviation Regulations (VOL 55 FR No. 147 Page 31042; dated July 31, 1990) under section 97.27 effective September 20, 1990, which is hereby amended as follows:

Fort Drum, NY—Wheeler Sack, AAF, NDB-B Orig, CANCELLED.
 Remove and Destroy.

Note at end of § 97.29.

The FAA published an Amendment in Docket No. 26291, Amdt. No. 1431 to part 97 of the Federal Aviation Regulations (VOL 55 FR No. 147 Page 31042; dated July 31, 1990) under section 97.29 effective August 23, 1990, which is hereby amended as follows:

Topeka, KS—Philip Billard Muni, ILS Rwy 13, Amdt. 30.

Remove and Destroy.

Note: Change the effective date of the following Takeoff Procedure to 23 Aug 90:

Kaunakakai, Molokai, HI, Amdt. 4.

Note: Change the following Takeoff Procedure at Tulsa Intl, Tulsa, OK, Amdt. 3 dtd 23 Aug 90 to read:

Takeoff Minimums: Rwy 8, 26, 17L, 35R, 35L—STANDARD. Rwy 17R—200-1 or STANDARD with minimum climb of 210 ft/NM to 900'.

IFR Departure Procedure: Comply with SID or as cleared.

Note at end of section 97.27.

The FAA published an Amendment in Docket No. 26291, Amdt. No. 1431 to part 97 of the Federal Aviation Regulations (VOL 55 FR No. 147 Page 31042; dated July 31, 1990) under section 97.27 effective September 20, 1990, which is hereby amended as follows:

Fort Drum, NY—Wheeler Sack AAF, NDB-B Orig, CANCELLED.
 Remove and Destroy.

[FR Doc. 90-18791 Filed 8-9-90; 8:45 am]

BILLING CODE 4910-13-M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

21 CFR Parts 510, 520, and 522

Animal Drugs, Feeds, and Related Products; VET-A-MIX, Inc.

AGENCY: Food and Drug Administration, HHS.

ACTION: Final rule.

SUMMARY: The Food and Drug Administration (FDA) is amending the animal drug regulations to reflect the correct drug labeler code for Vet-A-Mix, Inc. In the Federal Register of October 3, 1989 (54 FR 40656), FDA published a final rule to reflect a change in sponsor name and address. The sponsor number appeared incorrectly. This document is correcting that error.

EFFECTIVE DATE: August 10, 1990.

FOR FURTHER INFORMATION CONTACT:

Norman J. Turner, Center for Veterinary Medicine (HFV-214), Food and Drug Administration, 5600 Fishers Lane, Rockville, MD 20857, 301-443-4093.

SUPPLEMENTARY INFORMATION: In the Federal Register of October 3, 1989 (54 FR 40656), FDA published a document amending the animal drug regulations to reflect the change of sponsor of NADA 140-866 to Vet-A-Mix, Inc., P.O. Box A, Shenandoah, IA 51601. The drug labeler code used was in error. FDA is amending the regulation in 21 CFR 510.600 (c)(1) and (c)(2) to reflect the correct drug labeler code. Also, FDA is amending 21 CFR 520.622c(b)(3), 522.2662(b), and 522.2670(b) to insert the correct drug labeler code for Vet-A-Mix, Inc.

List of Subjects

21 CFR Part 510

Administrative practice and procedure, Animal drugs, Labeling, Reporting and recordkeeping requirements.

21 CFR Parts 520 and 522

Animal drugs.

Therefore, under the Federal Food, Drug, and Cosmetic Act and under authority delegated to the Commissioner of Food and Drugs and redelegated to the Center for Veterinary Medicine, 21

CFR parts 510, 520, and 522 are amended as follows:

PART 510—NEW ANIMAL DRUGS

1. The authority citation for 21 CFR part 510 continues to read as follows:

Authority: Secs. 201, 301, 501, 502, 503, 512, 701, 706 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321, 331, 351, 352, 353, 360b, 371, 376).

§ 510.600 [Amended]

2. Section 510.600, *Names, addresses, and drug labeler codes of sponsors of approved applications* is amended in the table in paragraph (c)(1) in the entry for "Vet-A-Mix, Inc.," by revising the drug labeler code and in the table in paragraph (c)(2) by removing the entry for "032998" and numerically adding a new entry "011789" to read as follows:

§ 510.600 *Names, addresses, and drug labeler codes of sponsors of approved applications.*

(c) * * *	
(1) * * *	
Firm name and address	Drug labeler code
Vet-A-Mix, Inc., P.O. Box A, Shenandoah, IA 51601	011789
(2) * * *	
Drug labeler code	Firm name and address
011789	Vet-A-Mix, Inc., P.O. Box A, Shenandoah, IA 51601

PART 520—ORAL DOSAGE FORM NEW ANIMAL DRUGS NOT SUBJECT TO CERTIFICATION

3. The authority citation for 21 CFR part 520 continues to read as follows:

Authority: Sec. 512 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 360b).

§ 520.622c [Amended]

4. Section 520.622c, *Diethylcarbamazine citrate chewable tablets* is amended in paragraph (b)(3) by removing "032998" and inserting in its place "011789".

PART 522—IMPLANTATION OR INJECTABLE DOSAGE FORM NEW ANIMAL DRUGS NOT SUBJECT TO CERTIFICATION

5. The authority citation for 21 CFR part 522 continues to read as follows:

Authority: Sec. 512 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 360b).

§ 522.2662 [Amended]

6. Section 522.2662, *Xylazine hydrochloride injection* is amended in paragraph (b) by removing "032998" and inserting in its place "011789".

§ 522.2670 [Amended]

7. Section 522.2670, *Yohimbine injectable* is amended in paragraph (b) by removing "032998" and inserting in its place "011789".

Dated: August 3, 1990.

Gerald B. Guest,

Director, Center for Veterinary Medicine.

[FR Doc. 90-18859 8-9-90; 8:45 am]

BILLING CODE 4160-01-M

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Part 1910

RIN 1218-AA 82

Occupational Exposure to Formaldehyde

AGENCY: Occupational Safety and Health Administration (OSHA), Labor.

ACTION: Extension of administrative stay.

SUMMARY: On December 4, 1987, the Occupational Safety and Health Administration (OSHA) published a final rule in the Federal Register on occupational exposure to formaldehyde (29 CFR 1910.1048, 52 FR 46168). In response to numerous public comments which indicated confusion about the hazard warning provisions of the newly revised Formaldehyde Standard, on December 13, 1988, OSHA announced an administrative stay of paragraphs (m)(1)(i) through (m)(4)(ii) for a period of nine months. OSHA also announced its intention to revoke paragraphs (m)(1)(i) through (m)(4)(ii) and invite comments on replacing them with the Hazard Communication Standard (29 CFR 1910.1200) or another equally protective alternative which would be less confusing to the public (53 FR 50198).

The stay was subsequently extended until August 13, 1990 (54 FR 35639, August 29, 1989; 55 FR 24070, June 13, 1990). OSHA is completing its re-

evaluation of the need to stay these paragraphs. More time is needed to complete this evaluation. Consequently the stay is extended an additional 120 days so that OSHA may complete this process. While this stay is in effect, affected employers must continue to comply with the provisions of OSHA's Hazard Communication Standard.

EFFECTIVE DATE: The administrative stay of 29 CFR 1910.1048 (m)(1)(i) through (m)(4)(ii) will be effective until December 11, 1990.

FOR FURTHER INFORMATION CONTACT:

Mr. James Foster, Occupational Safety and Health Administration, Office of Information and Consumer Affairs, U.S. Department of Labor, Room N-3647, 200 Constitution Avenue NW., Washington, DC 20210. Telephone (202) 523-8151.

Authority and Signature

This document was prepared under the direction of Gerard F. Scannell, Assistant Secretary of Labor for Occupational Safety and Health, 200 Constitution Avenue NW., Washington, DC 20210.

This action is taken pursuant to section 4(b), 6(b) and 8(c) of the Occupational Safety and Health Act of 1970 (84 Stat. 1593, 1597, 1599; 29 U.S.C. 653, 655, 657); Secretary of Labor's Order No. 1-90 (55 FR 9033) and 29 CFR part 1911.

List of Subjects in 29 CFR Part 1910

Formaldehyde, Occupational safety and health, Chemicals, Cancer, Health, Risk assessment.

§ 1910.1048 [Stayed in part]

Therefore, 29 CFR 1910.1048 (m)(1)(i) through (m)(4)(ii) is stayed until December 11, 1990.

Signed at Washington, DC this 3rd day of August.

Gerard F. Scannell,

Assistant Secretary of Labor for Occupational Safety and Health.

[FR Doc. 90-18738 Filed 8-9-90; 8:45 am]

BILLING CODE 4510-26-M

DEPARTMENT OF THE INTERIOR

Office of Surface Mining Reclamation and Enforcement

30 CFR Part 914

Indiana Permanent Regulatory Program

AGENCY: Office of Surface Mining Reclamation and Enforcement (OSM), Interior.

ACTION: Final rule; approval of amendment.

SUMMARY: OSM is announcing the approval with one exception of proposed amendments to the Indiana regulatory program (hereinafter referred to as the Indiana program) under the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The amendments consist of proposed changes to the Indiana program concerning public participation, prime farmland, enforcement, civil penalties and suspension or revocation of blaster certification. The amendments are intended to improve rule language and to correct codification.

EFFECTIVE DATE: August 10, 1990.

FOR FURTHER INFORMATION CONTACT: Mr. Richard D. Rieke, Director, Indianapolis Field Office, Office of Surface Mining Reclamation and Enforcement, Minton-Capehart Federal Building, 575 North Pennsylvania Street, room 301, Indianapolis, Indiana 46204; Telephone (317) 226-6166.

SUPPLEMENTARY INFORMATION:

- I. Background on the Indiana Program
- II. Submission of Amendment
- III. Director's Findings
- IV. Summary and Disposition of Comments
- V. Director's Decision
- VI. Procedural Determinations

I. Background on the Indiana Program

The Secretary of the Interior conditionally approved the Indiana program effective July 29, 1982. Information pertinent to the general background on the Indiana program, including the Secretary's findings, the disposition of comments, and a detailed explanation of conditions of approval of the Indiana program can be found in the July 26, 1982 *Federal Register* (47 FR 32107). Subsequent actions concerning the conditions of approval and proposed amendments are identified at 30 CFR 914.10, 914.15 and 914.16.

II. Submission of Amendment

By letter dated December 5, 1989, (Administrative Record No. IND-0725), the Indiana Department of Natural Resources (IDNR) submitted a proposed amendment to the Indiana program which makes numerous stylistic and codification changes to various parts of the approved program concerning public participation, prime farmland, enforcement, civil penalties, and suspension or revocation of blaster certification. The amendment also changes a reference at 310 IAC 12-3-9(c) concerning adjudicative procedures from IC 4-22-1 to IC 4-21.5.

OSM announced receipt of the proposed amendments in the January 25,

1990, *Federal Register* (55 FR 2536), and, in the same notice, opened the public comment period and provided opportunity for a public hearing on the adequacy of the proposed amendments. The comment period ended on February 26, 1990. The public hearing scheduled for February 20, 1990, was not held because no one requested an opportunity to testify.

Following a review of the proposed amendments, OSM informed Indiana by a letter dated March 21, 1990 (Administrative Record No. IND-0763) of proposed amendment provisions that appeared to contain typographical errors. Indiana responded by letter dated May 16, 1990 (Administrative Record No. IND-0774) and verified and corrected the errors. OSM did not reopen the public comment period because the changes were of a minor nature.

III. Director's Findings

Set forth below, pursuant to SMCRA and the Federal regulations at 30 CFR 732.15 and 732.17, are the Director's findings concerning the proposed amendments to the Indiana program. Most of the proposed amendments concern nonsubstantive wording changes, reference citation changes, or provide for recodification of the chapter and do not adversely affect other aspects of the program. Only those revisions of particular interest are discussed below. Any revisions not specifically discussed below are found to be no less stringent than SMCRA and no less effective than the Federal regulations.

The proposed rules at 310 IAC 12-3-111(c) are being amended to add that before any final determination by the Natural Resources Commission concerning any demonstrated pattern of willful violation of IC 13-4.1, the operator or applicant shall be afforded an opportunity for a hearing on the determination under IC 4-21.5 and 310 IAC 0.6.

The Indiana rule at 310 IAC 0.6 which is referenced in this proposed rule change pertains to proposed rules concerning adjudicative proceedings which are not currently part of the approved Indiana program. Indiana submitted the proposed rules at 310 IAC 0.6 to OSM for review on December 5, 1989 (Administrative Record No. IND-0723). OSM is currently reviewing the proposed amendments at 310 IAC 0.6, but has not approved the provisions at 310 IAC 0.6 for inclusion in the Indiana program. Section 503 of SMCRA provides that a State may not exercise jurisdiction under SMCRA unless the State program is approved by the

Secretary. Similarly, 30 CFR 732.17(a) requires that any alteration of an approved State program be submitted to OSM for review as a program amendment. Thus, any changes to the State program are not enforceable until approved by OSM.

Indiana has proposed to revise 310 IAC 12-3-111(c), 12-6-8(e) and (g), 12-6-9(a), 12-6-16(b)(1) and 12-8-9(c) by deleting references to IC 4-22-1 and replacing those references with IC 4-21.5. These changes reflect Indiana's repeal, by Indiana Public Law 18-1986, of the administrative adjudication statutes at IC 4-22-1 and the replacement of those statutes with the administrative adjudication statutes at IC 4-21.5.

The Director finds the amendments at 310 IAC 12-3-111(c) render the Indiana program to be no less effective than SMCRA and the Federal regulations with the exception noted above. Pending the outcome of the Director's review of Indiana's proposed amendment at 310 IAC 0.6 concerning adjudicative proceedings, the Director is not acting at this time on the part of Indiana's proposed amendment at 310 IAC 12-3-111(c) which cites the Indiana regulations at 310 IAC 0.6.

IV. Summary and Disposition of Comments

Public Comments

The public comment period and opportunity to request a public hearing announced in the January 25, 1990, *Federal Register* ended on February 26, 1990. No public comments were received and the scheduled public hearing was not held as no one requested an opportunity to provide testimony.

Agency Comments

Pursuant to section 503(b) of SMCRA and the implementing regulations at 30 CFR 732.17(h)(11)(i), comments were also solicited from various Federal agencies with an actual or potential interest in the Indiana program. No substantive comments were received.

V. Director's Decision

Based on the above Finding, and except as noted below, the Director is approving the Indiana program amendment as submitted by Indiana on December 5, 1989, and as clarified by letter dated May 16, 1990. As discussed in the Finding, the Director is deferring a decision on the inclusion of reference to 310 IAC 0.6 at proposed 310 IAC 12-3-111(c) pending the outcome of OSM's review of proposed 310 IAC 0.6 as included in Indiana's program amendment concerning adjudicative

proceedings. The Federal regulations at 30 CFR part 914 codifying decisions concerning the Indiana program are being amended to implement this decision.

This final rule is being made effective immediately to expedite the State program amendment process and to encourage states to bring their programs in conformity with the Federal standards without undue delay. Consistency of State and Federal standards is required by SMCRA.

Effect of Director's Decision

Section 503 of SMCRA provides that a State may not exercise jurisdiction under SMCRA unless the State program is approved by the Secretary. Similarly, 30 CFR 732.17(c) requires that any alteration of an approved State program be submitted to OSM for review as a program amendment. Thus, any changes to the State program are not enforceable until approved by OSM. The Federal regulations at 30 CFR 732.17(g) prohibit any unilateral changes to approved State programs. In his oversight of the Indiana program, the Director will recognize only the statutes, regulations and other materials approved by him, together with any consistent implementing policies, directives and other materials, and will require the enforcement by Indiana of only such provisions.

VI. Procedural Determinations

National Environmental Policy Act

The Secretary has determined that, pursuant to section 702(d) of SMCRA, 30 U.S.C. 1292(d), no environmental impact statement need to be prepared on this rulemaking.

Executive Order No. 12291 and the Regulatory Flexibility Act

On July 12, 1984, the Office of Management and Budget (OMB) granted OSM an exemption from Sections 3, 4, 7, and 8 of Executive Order 12291 for actions directly related to approval or conditional approval of State regulatory programs. Therefore, this action is exempt from preparation of a regulatory impact analysis and regulatory review by OMB.

The Department of the Interior has determined that this rule will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). This rule will not impose any new requirements; rather, it will ensure that existing requirements established by SMCRA and the Federal rules will be met by the State.

Paperwork Reduction Act

This rule does not contain information collection requirements which require approval by the Office of Management and Budget under 44 U.S.C. 3507.

List of Subjects in 30 CFR Part 914

Coal mining, Intergovernmental relations, Surface mining, Underground mining.

Dated: August 2, 1990.

Carl C. Close,

Assistant Director, Eastern Field Operations.

For the reasons set out in the preamble, title 30, chapter VII, subchapter T of the Code of Federal Regulations is amended as set forth below:

PART 914—INDIANA

1. The authority citation for part 914 continues to read as follows:

Authority: 30 U.S.C. 1201 *et seq.*

2. In § 914.15, paragraph (aa) is added to read as follows:

§ 914.15 Approval of regulatory program amendments.

(aa) The following amendment to the Indiana regulatory program, as submitted to OSM on December 5, 1989, and as clarified on May 16, 1990, is approved, except as noted below, effective August 10, 1990. Amendment to the Indiana Administrative Code at 310 IAC 12-3-111 concerning public participation; 12-5-148 concerning prime farmland; 12-6-8 concerning public hearings; 12-6-9 concerning review of citations; 12-6-16 concerning civil penalties; and 12-8-9 concerning suspension or revocation of blaster certification. Action is being deferred on the proposed amendment at 310 IAC 12-3-111(c) which would add a reference to 310 IAC 0.6 pending the outcome of OSM's review of Indiana's proposed program amendments at 310 IAC 0.6. [FR Doc. 90-18813 Filed 8-9-90; 8:45 am]

BILLING CODE 4310-05-M

30 CFR Part 917

Kentucky Regulatory Program; 1988 Legislation

AGENCY: Office of Surface Mining Reclamation and Enforcement (OSM), Interior.

ACTION: Final rule; approval of amendment.

SUMMARY: OSM is announcing the approval of proposed amendments to the Kentucky regulatory program

(hereinafter referred to as the Kentucky program) under the Surface Mining Control and Reclamation Act of 1977 (SMCRA). Addressed in this rulemaking are the amendments contained in Kentucky Senate Bill 377, House Bill 657, House Bill 673, and House Bill 709 containing provisions that impact the regulation of surface mining and reclamation under SMCRA. The amendment contained in Senate Bill 258 was addressed by the Director in a separate notice of disapproval of proposed amendment published in the February 12, 1990, **Federal Register** (55 FR 4866-4868). Action on the amendment contained in Senate Bill 338 is being deferred by the Director until the results of a study of the Kentucky alternative bonding system are evaluated.

EFFECTIVE DATE: August 10, 1990.

FOR FURTHER INFORMATION CONTACT:

Mr. William Kovacic, Director, Lexington Field Office, Telephone (606) 233-7327.

SUPPLEMENTARY INFORMATION:

- I. Background on the Kentucky program
- II. Discussion of amendments
- III. Director's findings
- IV. Public and Agency Comments
- V. Director's decision
- VI. Procedural determinations

I. Background on the Kentucky Program

The Secretary of the Interior conditionally approved the Kentucky regulatory program effective May 18, 1982. Information pertinent to the general background and revisions to the permanent program submission, as well as the Secretary's findings, the disposition of comments and a detailed explanation of the conditions of approval can be found in the May 18, 1981, **Federal Register** (47 FR 21404-21435). Subsequent actions concerning the conditions of approval and program amendments are identified at 30 CFR 917.11, 30 CFR 917.13, 30 CFR 917.15, 30 CFR 917.16 and 30 CFR 917.17.

II. Submission of Amendments

By letter dated April 21, 1988 (Administrative Record Number KY-800), Kentucky submitted program amendments to modify its regulations to conform to changes in Kentucky law enacted by the 1988 Kentucky General Assembly. OSM announced receipt of the proposed amendments in the June 21, 1988, **Federal Register** (53 FR 23287-23289), and in the same notice, opened the public comment period and provided opportunity for a public hearing on the adequacy of the proposed amendments. The public comment period ended on July 21, 1988. Review of the proposed amendments identified several apparent

deficiencies and on September 29, 1988, Kentucky was asked by OSM to submit additional supporting information (Administrative Record Number KY-831). On February 23, 1989, Kentucky responded to OSM's request by submitting additional information on five of the six bills enacted by the 1988 General Assembly (Administrative Record Number KY-859). In view of the new information provided by Kentucky, OSM announced in the March 31, 1989, *Federal Register* (54 FR 13198-13199) a reopening and extension of the public comment period. This action was taken to afford the public an opportunity to review these proposals in light of the additional information provided by Kentucky. The reopened comment period ended on May 1, 1989.

III. Director's Findings

Set forth below pursuant to SMCRA and the Federal regulations at 30 CFR 732.15 and 732.17, are the Director's findings concerning the proposed amendments to the Kentucky program. Only substantive changes will be discussed in detail. Revisions not specifically discussed are found to be no less stringent than SMCRA and no less effective than the Federal regulations. The revisions to KRS 351.175 and 177.990; and the addition of a new section to KRS chapter 177 contained in House Bill 673 are not a part of the Kentucky approved program and are therefore not addressed herein.

1. KRS 350.020 Declaration of Legislative Policy and Finding of Fact

Kentucky has amended its Surface Mining Law (KRS chapter 350) through the actions of the Kentucky General Assembly. The amendment contained in SB-377 deletes the word "primary" and adds new language to KRS 350.020 that excludes all other government entities except the Commonwealth and agencies thereof, and except as provided for in KRS chapter 100, from regulating surface coal mining operations. The direct language of the amendment appears to challenge Federal authority in Kentucky under SMCRA. However, the intent of the language, as explained by Kentucky in a letter to OSM dated February 23, 1989 (Administrative Record Number KY-859), is not to limit Federal authority under SMCRA but to maximize State authority under the Federal act. While there is no direct federal counterpart to the Director finds the proposed amendment is not inconsistent with SMCRA and the Federal regulations.

2. KRS 350.060 Permit; Application; Map; Transportation Plan; Proof of Public Liability Insurance Coverage; Fee; Bond; Mining Two (2) Acres or Less; Permit Renewal or Termination; Auger Mining of Previously Mined Area; Exempt Operations

a. Kentucky has amended its Surface Mining Law (KRS chapter 350) through the actions of the Kentucky General Assembly. The amendment contained in HB-709 deletes the word "penal" from the term "penal sum" as that term is used in KRS 350.060(11) (formerly KRS 350.060(14)). Kentucky has stated that this amendment does not change the nature of the bond, that is, that the bond required by these sections is posted for the purpose of ensuring the faithful performance of all the requirements of the act, the regulatory program, the permit, and the reclamation plan for the permit area (Administrative Record No. KY-859). The Federal regulations at 30 CFR 800.11(a) require the filing of a bond to ensure "performance". Kentucky presented its interpretation of the term "reclamation bond", in its letter dated February 23, 1989 (Administrative Record No. KY-859), as being as encompassing as the term "performance bond", as that term is used in the Federal regulations. The amendment also adds language to KRS 350.060(11) (formerly KRS 350.060(14)) to clarify that when a bond is forfeited, the entire amount of the bond for the permit area or increment shall be forfeited. The Federal regulations at 30 CFR 800.50(a) require that if an operator defaults on conditions under which a bond is accepted, the regulatory authority shall take actions to forfeit all or a part of a bond or bonds for any permit area or an increment of a permit area. The Director finds the proposed amendment is no less effective than the Federal regulations at 30 CFR 800.11(a) and 800.50(a).

b. Kentucky has amended its Surface Mining Law (KRS chapter 350) through the actions of the Kentucky General Assembly. The amendment contained in HB-673 deletes from KRS 350.060 (11) the requirement for a transportation plan for portions of the state primary road system as part of the surface mining permit application. There is no comparable Federal regulation requiring the submission of a transportation plan for the use of existing public roads to transport minerals extracted by mining. Since there is no Federal requirement for inclusion of a transportation plan in the Kentucky approved program the deletion of that requirement from the Kentucky program does not render that program inconsistent with SMCRA or the Federal regulations. The Director

finds the proposed amendment to be not inconsistent with SMCRA or the Federal regulations.

c. Kentucky has amended its Surface Mining Law (KRS chapter 350) through the actions of the Kentucky General Assembly. The amendment contained in HB-657 deletes subsections 2 and 3 from KRS 350.060 that relates only to interim program permits. These rules no longer apply under the permanent program. The amendment also removes the requirement that a transportation plan be submitted as a part of a permit application package, and removes the reference to the performance bond as a "penal sum". The rationale for the Director's finding on these provisions is presented in findings 2(a) and 2(b) above, where identical amendments are discussed as parts of HB-709 and HB-673. The Director finds the proposed amendment is no less effective than the Federal regulations at 30 CFR 800.11(a) and 30 CFR 800.50(a).

d. Kentucky has amended its Surface Mining Law (KRS chapter 350) by the actions of the Kentucky General Assembly. The amendment contained in House Bill 657 specifies at KRS 350.060(12) (formerly KRS 350.060(13)) that operations that affected two (2) acres or less which were conducted under two-acre-or-less permits issued by the Cabinet, which were commenced on or before June 5, 1987, and on which mining ceased on or before November 7, 1987, are exempt from this chapter, but adds that reclamation of these operations shall be accomplished in accordance with the Administrative regulations of the Cabinet for operations of two (2) acres or less. Kentucky is deleting language that gave the State authority to promulgate regulations for two-acre-or-less permits that were less stringent than regulations for surface coal mining operations affecting more than two acres. Kentucky is also adding a sentence to make it clear that on two-acre-or-less sites, bonds shall be maintained until reclamation is successfully completed. This amendment is proposed to conform Kentucky's regulations with the amendments to section 528(2) of SMCRA by the enactment of Public Law 100-34. On May 7, 1987, the President signed Public Law 100-34 repealing the exemption previously provided for coal extraction for commercial purposes from sites affecting two acres or less. Thus, after the effective date of November 8, 1987 all surface mining operations, regardless of acreage affected, must be conducted to satisfy the requirements of SMCRA. The Kentucky amendment also removes the \$1000 per acre maximum

amount for bond, the short form permit application and the discretionary ability of the Cabinet to reduce the bond amount for two acre or less permits. Finally, Kentucky at KRS 350.060(13) (formerly KRS 350.060(14)) is eliminating a permitting distinction between underground mines of two-acres-or-less and those over two acres. The Director finds the proposed amendment is no less stringent than SMCRA at section 528.

e. Kentucky has amended its Surface Mining Law (KRS chapter 350) by action of the Kentucky General Assembly. The amendment contained in House Bill No. 657 modifies the language of KRS 350.060(3)(e) to provide that the temporary and permanent post-office addresses of the applicant provided in a permit application be updated immediately if changed at any point prior to final bond release. The Director finds the proposed amendment not inconsistent with the Federal regulations at 30 CFR 773.17, 778.13, and 778.14 relating to the updating of permit information.

f. KRS 350.060(3)(g) is modified by House Bill No. 657 to require that the permit application contain the names and addresses of every officer, partner, director, or person performing a function similar to a director of the applicant, together with the names and addresses of any individual owning of record ten percent (10%) or more of any class of voting stock of the applicant. It also requires the permit application to discuss whether the applicant or any such person is subject to any of the provisions of subchapter (3) of KRS 350.130 dealing with permit revocation, suspension and termination. Additionally, new language is added to require the permittee to submit updates of this information as changes occur or as otherwise provided by administrative regulations, and to clarify that failure to submit updated information shall constitute a violation of this chapter only upon the permittee's refusal or failure to timely submit such information to the cabinet upon request. Since all permits issued by the Cabinet contain a condition requiring the permittee to update changes in ownership and control information within 30 days, no additional request from the Cabinet is required prior to citing a violation. Upon receipt of such updated information satisfactory to the cabinet, the cabinet shall promptly update its computer system containing such information. SMCRA at subsection 507(b)(4) requires that if the applicant is a partnership, corporation, association or other business entity, the permit application shall contain the names and addresses

of every officer, partner, director or person performing a function similar to a director of the applicant, together with the name and address of any person owing, of record 10 per centum or more of any class of voting stock of the applicant and a list of all names under which the applicant, partner, or principal shareholder previously operated a surface mining operation within the United States within the five-year period preceding the date of submission of the application. When amended KRS 350.060(3)(g) is read together with approved 405 KAR 8:030 section 2(3)(c), which prescribes the application reporting requirements for businesses other than single proprietorships, the application content requirements are the same as those required by SMCRA. The Director finds the proposed amendment to be no less stringent than section 507(b)(4) of SMCRA.

3. KRS 350.064 Incremental Bonding; Self-bonding and Alternative Bonding

Kentucky has amended its Surface Mining Law (KRS chapter 350) through the actions of the Kentucky General Assembly. The amendment contained in HB-709 inserts the word "reclamation" before the term "bond" in KRS 350.064 (1) and (2). Based on Kentucky's interpretation of the term "reclamation bond", as presented in its letter dated February 23, 1989 (Administrative Record No. KY-859), is that it is as encompassing as the term "performance bond", as that term is used in the Federal regulations. The Director finds the amendment to be no less effective than the Federal regulations at 30 CFR 701.5 and 30 CFR 800.11(a).

4. KRS 350.093 Time and Distance Limits on Reclamation Efforts; Deferments; Drift Mining or Other Underground Mining; Granting of Variances; Release of Bond

a. Kentucky has amended its Surface Mining Law (KRS chapter 350) by action of the Kentucky General Assembly. The amendment contained in House Bill 657 adds new language to KRS 350.093(4)(b) to correct a grammatical error in the existing statute. The statute at KRS 350.093(4)(b) reads in part as follows: "After revegetation has been established on the regraded mined lands in accordance with the approved reclamation plan additional bond or collateral for the applicable permit shall be released." The phrase "additional bond or collateral for applicable permit shall be released" has been added.

The amendment also modifies KRS 350.093(4)(c) to clarify that when the operator has completed successfully all

surface coal mining and reclamation activities, the release of the remaining portion of the bond, *or collateral*, may be allowed by the cabinet but not before the expiration of the period specified for operator responsibility (emphasis added). The term "collateral" has been added. The addition of the term collateral makes KRS 350.093(4)(c) consistent with the language in existing Kentucky statutes, specifically KRS 350.093(4)(a). The Federal regulations at 30 CFR 800.40(c)(2) provide that after revegetation has been established on the regraded mined lands in accordance with the approved reclamation plan an additional amount of bond may be released by the regulatory authority. At 30 CFR 800.40(c)(3) the Federal regulations provide that after the operator has successfully completed all surface coal mining and reclamation activities the remaining portion of the bond may be released, but not before the period specified for operator responsibility has expired. The term bond in the Federal program includes collateral bonds as defined in 30 CFR 800.5. The Director finds the proposed amendment to be no less effective than the Federal regulations at 30 CFR 800.40(c) (2) & (3).

b. Kentucky has amended its Surface Mining Law (KRS chapter 350) through the actions of the Kentucky General Assembly. The amendment contained in HB-657 clarifies and expands at KRS 350.093 pertaining to the procedures for filing a total or partial bond release request.

The introductory paragraph to KRS 350.093(5) allows either the permittee to file or the Cabinet to initiate an application for total or partial bond release upon the completion of total or phase reclamation.

While the Federal regulation at 30 CFR 800.40(a) allows a permittee to file a bond release request, the Federal regulations are silent as to whether a regulatory authority may initiate bond release proceedings. Under the Kentucky proposal, bond release proceedings initiated by the regulatory authority must conform with the same procedural steps as a bond release initiated by the permittee. Because there may be circumstances where it may be necessary for a party other than the permittee to achieve bond release, such as, to release jurisdiction from an abandoned but fully reclaimed site, the Director finds allowing the regulatory authority to initiate bond release does not render the Kentucky program less effective than the Federal regulations at 30 CFR 800.40(a).

Paragraph (a) of KRS 350.093(5) clarifies that a permittee has the right to begin public advertisement of its request for bond release at the time of filing the request. Further, the proposed provision allows the Cabinet to undertake, at the permittee's expense, public advertisement of any Cabinet initiated bond releases. In any event, all public advertisements of bond release applications, must begin within 60 days of filing the request by the permittee or upon the initiation of the bond release by the Cabinet. The public advertisement must occur at least once a week for four successive weeks in a newspaper of general circulation in the locality of the surface mining operation.

The Federal regulations at 30 CFR 800.40(a)(2) require that within 30 days after an application for bond release has been filed, the permittee shall submit a copy of the advertisement placed at least once a week for four successive weeks in a newspaper of general circulation in the locality of surface coal mining. Although the timeframe proposed by Kentucky at KRS 350.093(5)(a) differs from those specified in the Federal regulations and section 519(a) of SMCRA, from which the Federal regulations were derived, the Kentucky timeframe for advertisement when viewed with the other procedural steps in the bond release process will afford the public the right and opportunity to comment, raise objections, and request formal hearings on the bond release application prior to a final decision by the regulatory authority. Therefore, the Director finds that KRS 350.093(5)(a) as proposed is no less effective than the comparable requirements at 30 CFR 800.40(a)(2).

Paragraph KRS 350.093(5)(b) of the proposed Kentucky statute specify the contents of the newspaper advertisement. Since the contents prescribed by the Kentucky statute are substantially identical to those contents required at 30 CFR 800.40(a)(2), KRS 350.093(5)(b) is no less effective than the Federal regulations.

Paragraph KRS 350.093(5)(c) of the proposed Kentucky regulations specifies that within 30 days of a filing of a bond release request, the permittee must submit copies of letters that were sent to adjoining property owners, local governmental bodies, planning agencies, sewage and water treatment authorities, and water companies in the locality in which mining occurred, notifying them of the intention to release bond. For bond release initiated by Kentucky, identical notification shall also be undertaken. The notification procedures

are identical to those prescribed in 30 CFR 800.40(a)(2).

Paragraph KRS 350.093(5)(d), pertaining to the notification by Kentucky of the municipality where the surface mining operation is located of a bond release application clarifies that notification will occur for State initiated bond release and in all cases notification will be made within 30 days of the filing. The requirement to notify a municipality in the timeframe specified is essentially the same as that required by 30 CFR 800.40(e) and is therefore no less effective than that Federal requirement.

Paragraph KRS 350.093(7) is revised to require that a permittee be notified of the decision to release or not release bond within five days following receipt of proof of the publication of the newspaper advertisement or at the end of the 30 day public comment period, whichever is later. Kentucky has clarified in its discussions with OSM that the proof of publication can consist of copies of all four advertisements published or an affidavit of the proof of publication and the last ad run (Administrative Record No. KY-1001). Paragraph (7) also specifies that in the event a public hearing is held, notification of the decision will be rendered 30 days thereafter.

The Federal regulations at 30 CFR 800.40(b)(2) requires the regulatory authority to notify the bond release applicant of the decision to grant or deny the release within 60 days from the filing of the bond release application or within 30 days after the hearing on the bond release. If no hearing is held and if the inspection is not delayed for weather, notification under the Federal program can occur as early as 51 days and as late as 60 days. Under the proposed Kentucky scheme, notification can occur as early as 51 days and as late as 116 days. Section 519(a) of SMCRA requires notification to be made in 60 days after filing. Although the Kentucky proposal will allow a longer timeframe in order to render a decision, the rights of the permittee and interested parties are preserved by Kentucky making a decision in a reasonable manner. Consequently, the Director finds that KRS 350.093(7) as proposed is no less effective than the Federal regulations at 30 CFR 800.40(b)(2).

The amendment at KRS 350.093(8) also provides that in no event shall the Cabinet disapprove an application for release of a surety bond or a bond secured by a letter of credit or take any action to forfeit such a bond based solely on the permittee's failure to pay penalties or fines, if all reclamation

requirements for the requested release have been met. It provides further that the Cabinet shall not continue to hold remaining bond or bond proceeds where a forfeiture has occurred solely as a result of a failure to pay penalties or fines, if all reclamation requirements of KRS chapter 350 have been met. The Director finds the proposed amendment to be no less effective than the Federal regulations at 30 CFR 800.40.

5. KRS 350.130 Notice of Noncompliance; Order for Immediate Compliance and Cessation; Revocation of Permit or Termination of Operation After Hearing; Bond Forfeiture; Denial of Additional Permits or Future Operations; Cabinet Authority

Kentucky has amended its Surface Mining Law (KRS chapter 350) through the actions of the Kentucky General Assembly. The amendment contained in HB-657 found at KRS 350.130(1) provides that any bonding company or financial institution providing bond shall have the right to perform the measures necessary to secure bond release if it can demonstrate that it has the ability to perform the measures and will undertake to do so within a reasonable time. Modified subsection (1) specifies further that neither the surety company nor the financial institution may employ anyone to perform said measures who has been barred from mining pursuant to the provisions of this chapter. Pursuant to 405 KAR 10:040 section 2 bond release (phase I, II, and III) occur when, among other things, the specific requirements of each phase of the approved reclamation plan are completed. Accordingly, the Federal regulations at 30 CFR 800.50(a)(2)(ii) provide that the regulatory authority may allow the surety to complete the reclamation plan or the portion of the reclamation plan applicable to the bonded phase or increment, if the surety can demonstrate its ability to complete the reclamation in accordance with the approved reclamation plan. Since Kentucky only allows a bond release after the applicable portions of the reclamation plan are met for each phase, the Director finds the proposed amendment no less effective than the Federal regulations at 30 CFR 800.50(a)(2)(ii). Kentucky is deleting language found at KRS 350.130(2) that allowed a surface estate owner to reclaim his unreclaimed land and then be paid the forfeited bond money. While there is no federal counterpart to this provision, its deletion does not render the Kentucky program inconsistent with the requirements of SMCRA and the federal regulations. Kentucky's KRS 350.130(2) is also

amended to provide that when a bond is forfeited consistent with the provisions of this chapter, the Cabinet shall forfeit the entire amount of the bond for the permit area or increment. In addition the Federal regulation at 30 CFR 800.50(c) provides that the regulatory authority may forfeit all or a part of a bond or bonds for any permit area or an increment of a permit area. The Director finds the proposed amendment is no less stringent than SMCRA and no less effective than the Federal regulation at 30 CFR 800.50.

6. KRS 350.131 Use of Forfeited Reclamation Bond Funds

a. Kentucky has amended its Surface Mining Law (KRS chapter 350) through the actions of the Kentucky General Assembly. The amendment contained in HB-657 modifies the language of KRS 350.131(1) to refer to a "bond" rather than a reclamation bond and adds a "cut-off" date which specifies that when an interim or preinterim program permit was forfeited prior to July 15, 1988 and the entire forfeited amount is not necessary to establish proper drainage and revegetation, the cabinet may use the remaining funds to supplement reclamation of other forfeited or released permit areas, if such other permit areas endanger public health or safety. The Federal interim program contains no standards or procedures for the forfeiture of performance bond but relies entirely on each State's program to utilize its experience in that area. Since there are no pertinent federal standards or procedures against which the proposed amendment can be judged, and since it promotes reclamation, the Director finds the proposed amendment to be not inconsistent with the requirements of SMCRA and the Federal regulations.

b. Kentucky has amended its Surface Mining Law (KRS chapter 350) through the actions of the Kentucky General Assembly. The amendment contained in HB-657 provides at KRS 350.131(2) that when a bond for an interim or permanent program permit is forfeited, and the amount is more than is necessary to complete reclamation, the unused funds shall be returned to the party from whom they were collected, subject to the Cabinet's right to attach or set off such proceeds under other state law. As to bonding for permanent program sites, a comparison of the federal regulatory history is useful. In 1980, the U.S. District Court for the District of Columbia remanded 808.14(b) of OSM's 1979 bond forfeiture regulation for not having a provision for returning unused portions of the forfeited bond. *In re: Permanent Surface Mining*

Regulations Litigation, 14 Env't Rep. Cas. 1083 (D.D.C. February 26, 1980). The court found that neither section 509 of SMCRA nor any other section of SMCRA allowed the use of excess bond money to pay for other costs of a state program. In response to the remand, OSM promulgated 800.50(d)(2), which requires the regulatory authority to return excess unused forfeited bond money to the party from whom they were collected. 48 FR 32932 (July 19, 1983).

The creation of this Kentucky statute does not supersede existing Kentucky set-off law, but allows set-off subject to other state laws. These state set-off laws are not dependent upon SMCRA for their authority. Thus, the issue that arose for OSM is not reached here, because Kentucky is not creating any new remedies nor is it relying on SMCRA for its statutory authority. While Kentucky's set-off provisions are not specifically found in SMCRA or the federal regulations, set-off for purposes of enforcing a pre-existing legitimate debt is not punitive and the Director finds the proposed amendment not to be inconsistent with the Federal regulations at 30 CFR 800.50(d)(2).

As to bonding for interim program sites there are no Federal regulations or applicable sections of SMCRA, thus the Director finds the proposed amendment to be not inconsistent with the requirements of SMCRA or the Federal regulations.

7. KRS 350.151 Promulgation of Permanent Program Rules and Regulations for Mining and Reclamation; Bond

Kentucky has amended its Surface Mining Law (KRS chapter 350) through the actions of the Kentucky General Assembly. The amendment contained in HB-709 at KRS 350.151(2) adds the word "reclamation" to the description of the bond posted with the Cabinet, deletes the word "penal" from the phrase "penal sum", and provides that when the Cabinet forfeits a bond it shall forfeit the entire amount of the bond for the permit area or increment. A discussion of the addition of the word "reclamation" is found in Director's finding No. 3 where consideration is given to the addition of that term to KRS 350.064. A discussion of the removal of the term "penal" is found in Director's finding No. 2(a) where that term was considered for removal from KRS 350.060. A discussion of forfeiture of the entire bond amount is also found in Director's finding No. 2(a). The Director finds the amendment to be no less stringent than SMCRA and no less effective than the Federal regulations at

30 CFR 701.5, 30 CFR 800.11(a) and 30 CFR 800.50(a).

IV. Public and Agency Comments

A public comment period and opportunity for a public hearing was announced in the June 21, 1988, *Federal Register* [53 FR 23287-23289]. That comment period closed on July 21, 1988. On March 31, 1989, *Federal Register* (54 FR 13198-13199), the public comment period was reopened to afford the public an opportunity to once again consider the proposals in light of additional information submitted by Kentucky. No one requested an opportunity to present testimony at a public hearing, so the scheduled hearing was not held. The nature and disposition of public comments received are summarized below.

Comments that contained suggestions and editorial changes intended to clarify or more closely conform the text of the Kentucky regulations to the requirements of SMCRA were received from five (5) sources. Public agencies commenting were the Kentucky Coal Association (KCA), the Kentucky Resources Council (KRC), and the National Coal Association (NCA). Government agencies commenting were the U.S. Department of Energy (DOE), and the Advisory Council on Historic Preservation (ACHP). Several comments received were not pertinent to issues proposed in this rulemaking. The Director will consider only pertinent comments and suggestions in making his decisions on the proposed amendments.

Senate Bill 377

The KRC commented that the intent of this measure to limit local authority over surface coal mining could, because of the language of the measure, be misinterpreted to limit the authority of all other governmental agencies, including the Federal government. However, clarification of the intent of the measure was provided by Kentucky and the KRC withdrew its objections to the measure.

The ACHP expressed a similar concern that the provisions of SB-377 could deny OSM's oversight role. They also expressed the view that local regulation of mining, not inconsistent with the Commonwealth's program, should not be prohibited. Clarification of the intent of this measure was provided by Kentucky in a letter to OSM dated February 23, 1989 (Administrative Record Number KY-859). The clarification letter explained that the language of the amendment was not intended to limit the Federal authority

under SMCRA but merely to maximize State authority under the Federal act.

The KCA and the DOE expressed their support for the provisions of SB-377.

House Bill 673

The Kentucky Coal Association (KCA) expressed their support for the provisions of House Bill 673. The KCA commented that the bill eliminates a non-essential requirement—the tracking of coal haul routes, resulting in a savings of time and money for the Department of Surface Mining. KCA commented that that since this same information is required by the Kentucky Transportation Cabinet in conjunction with the Kentucky Department of Mines and Minerals, a requirement for the same paperwork by the Kentucky Department of Surface Mining would be a duplication of effort.

House Bill 709

The KRC commented that the intended effect of the substitution of the word "reclamation" for the existing word "penal" in the description of the bond posted to ensure reclamation is unclear. They expressed the concern that the term reclamation bond may not be interpreted by the regulatory authority to convey the same extent and liability as the term performance bond used in section 509 of the SMCRA. However, additional information submitted by Kentucky to explain its position on this issue removed the source of KRC's concern.

The NCA commented in support of the provisions of House Bill 709 but added that any provision that would allow states to retain bond amounts in excess of the amount necessary to complete reclamation is punitive and inconsistent with the Act (SMCRA). As expressed in the Director's finding No. 6(b) of this document, the Director believes that Kentucky's set-off provision for the purpose of enforcing a preexisting legitimate debt is not punitive.

The KCA, and the U.S. DOE also expressed their support for the provisions of HB-709.

House Bill 657

The KRC commented that the provisions of this measure relating to the timing of notice to property owners, local governing bodies and other agencies do not conform to the requirements of the SMCRA or the Secretary's regulations. The concern of KRC is that the intent of the Federal provisions to insure timely notice to

landowners and others with an interest that a bond release request had been initiated. The Director agrees with the KRC that the proposed amendment does not conform precisely to the time schedule for publication of public notice as envisioned by SMCRA. However, a close examination of the details of the proposed amendment and the administrative procedures proposed by Kentucky to administer the bond release program convinces the Director that all of the essential elements required by SMCRA for the protection of the public interest are amply considered by the proposal.

The KCA and the DOE expressed their support for the provisions of HB-657.

V. Director's Decision

Based on the above findings, the Director is approving the amendments contained in Senate Bill 377, House Bill 657, House Bill 673, and House Bill 709 as submitted on April 21, 1988, and clarified on February 23, 1989. The Federal rules at 30 CFR part 917 concerning the Kentucky program are being amended to implement the Director's decision. This final rule is being made effective immediately to expedite the State program amendment process and to encourage States to conform their programs to the Federal standards without undue delay. Consistency of State and Federal standards is required by SMCRA.

EPA Concurrence

Under 30 CFR 732.17(h)(11)(ii), the Director is required to obtain the written concurrence of the Administrator of the Environmental Protection Agency (EPA) with respect to any provisions of a State program amendment that relates to air or water quality standards promulgated under the authority of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or the Clean Air Act (42 U.S.C. 7401 *et seq.*). The Director has determined that this amendment contains no provisions in these categories and that EPA's concurrence is not required.

VI. Procedural Determinations

National Environmental Policy Act

The Secretary has determined that, pursuant to section 702(d) of SMCRA, 30 U.S.C. 1292(d), no environmental impact statement need be prepared on this rulemaking.

Executive Order 12291 and the Regulatory Flexibility Act

On July 12, 1984, the Office of

Management and Budget (OMB) granted OSM an exemption from sections 3, 4, 7, and 8 of Executive Order 12291 for actions directly related to approval or conditional approval of State regulatory programs. Therefore, this action is exempt from preparation of a regulatory impact analysis and regulatory review by OMB.

The Department of the Interior has determined that this rule will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). This rule will not impose any new requirements; rather it will ensure that existing requirements established by SMCRA and the Federal rules will be met by the State.

Paperwork Reduction Act

This rule does not contain information collection requirements that require approval by the Office of Management and Budget under 44 U.S.C. 3507.

List of Subjects in 30 CFR Part 917

Coal mining, Intergovernmental relations, Surface mining, Underground mining.

Dated: August 2, 1990.

Carl C. Close,

Assistant Director, Eastern Field Operations.

For the reasons set out in the preamble, title 30, chapter VII, subchapter T of the Code of Federal Regulations is amended as set forth below:

PART 917—KENTUCKY

1. The authority citation for part 917 continues to read as follows:

Authority: 30 U.S.C. 1201 *et seq.*

2. In § 917.15, a new paragraph (dd) is added to read as follows:

§ 917.15 Approval of regulatory program amendments.

* * * * *

(dd) The following amendments to the Kentucky permanent regulatory program submitted to OSM on April 21, 1988, and clarified on February 23, 1989 are approved effective August 10, 1990. Revisions to the Kentucky Surface Mining Act in; KRS 350.020, KRS 350.060, KRS 350.064, KRS 350.093, KRS 350.130, KRS 350.131, KRS 350.151.

[FR Doc. 90-18814 Filed 8-9-90; 8:45 am]

BILLING CODE 4310-05-M

DEPARTMENT OF TRANSPORTATION

Coast Guard

33 CFR Part 100

[CGD13 90-08]

Special Local Regulations: Richland, WA, West Coast Outboard Championship Hydro Races

AGENCY: Coast Guard, DOT.

ACTION: Final rule.

SUMMARY: Special Local Regulations are being adopted for the Richland, Washington, West Coast Championship Hydro Race to be held on the waters of the Columbia River in Richland, Washington. This event will be held on the third Friday, Saturday, and Sunday of August, 6 a.m. p.d.t. until 6 p.m. p.d.t. daily, on an annual basis. The regulations are needed to promote the safety of life on navigable waters during the event.

EFFECTIVE DATE: This regulation becomes effective each year on the third Friday of August, at 6 a.m. p.d.t. and terminates on the third Sunday of August, at 6 p.m. p.d.t. or upon completion of each event.

FOR FURTHER INFORMATION CONTACT: MSTC A. J. Boatner, Coast Guard Marine Safety Office, Portland, Oregon, (503) 240-9319.

SUPPLEMENTARY INFORMATION: On May 31, 1990, the Coast Guard published a Notice of Proposed Rulemaking in the *Federal Register* for these regulations (55 FR 22036). Interested persons were requested to submit comments. None were received.

Drafting Information

The drafters of this notice were BMC F. L. Casanova, USCG, Project Officer, USCG Marine Safety Office, Portland, Oregon, and LT. Deborah Schram, USCG, Project Attorney, Thirteenth Coast Guard District Legal Office, Seattle, Washington.

Discussion of Regulations

The Sunfest West Coast Championship is sponsored by the Seattle Outboard Association and Richland Sunfest Association and this rulemaking is undertaken at the request of the city of Richland, Washington, the host city. The event involves a series of outboard hydroplane races covering a 2-mile long course in front of the Howard Amon Park on the Columbia River in Richland, Washington. This three-day event is expected to draw more than 100 participants and a huge crowd of spectators to the waters of the Columbia River. To promote the safety of the

participants and spectators, special local regulations are required. The economic impact of this regulation is expected to be minimal as it will affect only a small section of the Columbia River with no commercial traffic and will be in effect for approximately twelve hours only each day of the third Friday, Saturday, and Sunday of August on an annual basis.

List of Subjects in 33 CFR Part 100

Regattas and Marine Parades.

Regulations

In consideration of the foregoing, part 100 of title 33, Code of Federal Regulations, is amended as follows:

PART 100—[AMENDED]

1. The authority citation for part 100 continues to read as follows:

Authority: 33 U.S.C. 1233; 49 CFR 100.35.

2. A § 100.1305 is added to read as follows:

§ 100.1305 Richland, Washington, west coast outboard championship hydro races.

(a) *Regulated area.* By this regulation, the Coast Guard will restrict general navigation and anchorage on the waters of the Columbia River between River Mile 337 and River Mile 339. This restricted area includes all waters between the above mile marks in Richland, Washington, and is approximately 2 miles long.

(b) *Special local regulations.* (1) This event will take place from 6 a.m. p.d.t. to approximately 5 p.m. p.d.t. on the third Friday, Saturday, and Sunday of August, annually, in the described waters of the Columbia River, Richland, Washington.

(2) No person or vessel may enter or remain in the regulated area except for participants in the event, supporting personnel, vessels registered with the event organizer, and personnel or vessels authorized by the Coast Guard Patrol Commander.

(3) Patrol of the described area will be under the direction of a designated Coast Guard Patrol Commander. The Patrol Commander is empowered to control the movement of vessels in the regulated area and adjoining waters during the hours these regulations are in effect.

(4) A succession of sharp, short signals by whistle, siren, or horn, from vessels patrolling the area under the direction of the Patrol Commander shall serve as a signal to stop. Vessels or persons signaled shall stop and shall comply with the orders of the patrol vessel. Failure to do so may result in

expulsion from the area, citation for failure to comply, or both.

(c) *Effective times and dates.* This regulation becomes effective each year on the third Friday of August, at 6 a.m. p.d.t. and terminates on the third Sunday of August, at 6 p.m. p.d.t. or upon completion of each event.

Dated: July 31, 1990.

J.E. Vorbach,

Commander, Thirteenth Coast Guard District, U.S. Coast Guard.

[FR Doc. 90-18765 Filed 8-9-90; 8:45 am]

BILLING CODE 4910-14-M

ENVIRONMENTAL PROTECTION AGENCY**40 CFR Part 271**

(FRL-3819-8)

Mississippi; Final Authorization of Revisions to State Hazardous Waste Management Program

AGENCY: Environmental Protection Agency.

ACTION: Immediate final authorization.

SUMMARY: Mississippi has applied for final authorization of revisions to its hazardous waste program under the Resource Conservation and Recovery Act (RCRA). The Environmental Protection Agency (EPA) has reviewed Mississippi's application and has made a decision, subject to public review and comment, that Mississippi's hazardous waste program revisions satisfy all of the requirements necessary to qualify for final authorization. Thus, EPA intends to approve Mississippi's hazardous waste program revisions. Mississippi's application for program revisions is available for public review and comment.

DATES: Final authorization for Mississippi's program revisions shall be effective October 9, 1990 unless EPA publishes a prior *Federal Register* action withdrawing this immediate final rule. All comments on Mississippi's program revision application must be received by the close of business, September 10, 1990.

ADDRESSES: Copies of Mississippi's program revision application are available during 8 a.m. to 4 p.m. at the following addresses for inspection and copying: Mississippi Department of Environmental Quality, 2380 Highway 80 West, Post Office Box 10385, Jackson, Mississippi 39209; (601)961-5062; U.S. EPA Headquarters Library, PM 211A, 401 M Street SW., Washington, DC 20460; 202/382-5926; U.S. EPA Region

IV, Library, 345 Courtland Street NE., Atlanta, Georgia 30365; 404/347-4216. Written comments should be sent to Narindar Kumar at the address listed below.

FOR FURTHER INFORMATION CONTACT: Narindar Kumar, Chief, State Programs Section, Waste Programs Branch, Waste Management Division, U.S. Environmental Protection Agency, 345 Courtland Street NE., Atlanta, Georgia 30365; (404)347-2234.

SUPPLEMENTARY INFORMATION:

A. Background

States with final authorization under section 3006(b) of the Resource Conservation and Recovery Act ("RCRA" or "the Act"), 42 U.S.C. 6926(b), have a continuing obligation to maintain a hazardous waste program that is equivalent to, consistent with, and no less stringent than the Federal hazardous waste program. In addition, as an interim measure, the Hazardous and Solid Waste Amendments of 1984 (Public Law 98-616, November 8, 1984, hereinafter "HSWA") allows States to revise their programs to become substantially equivalent instead of equivalent to RCRA requirements promulgated under HSWA authority. States exercising the latter option receive "interim authorization" for the HSWA requirements under section 3006(g) of RCRA, 42 U.S.C. 6926(g), and later apply for final authorization for the HSWA requirements.

Revisions to State hazardous waste programs are necessary when Federal or State statutory or regulatory authority is modified or when certain other changes occur. Most commonly, State program revisions are necessitated by changes to EPA's regulations in 40 CFR parts 260-268 and 124 and 270.

B. Mississippi

Mississippi initially received final authorization for its base RCRA programs effective on June 27, 1984. Mississippi received authorization for revisions to its program effective on October 17, 1988. On May 21, 1990, Mississippi submitted a program revision application for additional program approvals. Today, Mississippi is seeking approval of its program revisions in accordance with 40 CFR 271.21(b)(3).

EPA has reviewed Mississippi's application, and has made an immediate final decision that Mississippi's hazardous waste program revisions satisfy all of the requirements necessary to qualify for final authorization. Consequently, EPA intends to grant final authorization for the additional program

modifications to Mississippi. The public may submit written comments on EPA's immediate final decision until September 10, 1990.

Mississippi's application for this program revision is available for inspection and copying at the locations indicated in the "ADDRESSES" section of this notice.

On the effective date of final authorization, Mississippi will be authorized to carry out, in lieu of the Federal program, those provisions of the State's program which are analogous to the following provisions of the Federal program:

Federal requirement	FR reference	Federal promulgation date
• List (Phase I) of Hazardous Constituents for Groundwater Monitoring.	52 FR 25942	July 9, 1987.
• Identification of Listing of Hazardous Waste.	52 FR 26012	July 10, 1987.
• Listing of Spent Pickle Liquor; Clarification.	52 FR 28697	Aug. 3, 1987.
• Development of Corrective Action Programs After Permitting Hazardous Waste Land Disposal Facilities; Corrections.	52 FR 33936	Sept. 9, 1987.
• Liability Requirements for Hazardous Waste Facilities; Corporate Guarantee.	52 FR 44314	Nov. 18, 1987.
• Hazardous Waste Miscellaneous Units.	52 FR 46946	Dec. 10, 1987.
• Technical Correction; Identification and Listing of Hazardous Waste.	53 FR 13382	Apr. 22, 1988.

Mississippi incorporates the Federal regulations by reference; analogous State provisions to the Federal requirements listed above were adopted on April 25, 1988 by the Mississippi Commission on Environmental Quality and became effective May 25, 1988. A copy of these regulations is available at the Mississippi Department of Environmental Quality as indicated in the "Addresses" section of this notice.

EPA shall administer any RCRA hazardous waste permits, or portions of permits, that contain conditions based

upon the Federal program provisions for which the State is applying for authorization and which were issued by EPA prior to the effective date of this authorization. EPA will suspend issuance of any further permits under the provisions for which the State is being authorized on the effective date of this authorization.

Mississippi is not authorized to operate the Federal program on Indian lands. This authority remains with EPA unless provided otherwise in a future statute or regulation.

Approval of Mississippi's program revisions shall become effective on October 9, 1990, unless an adverse comment pertaining to the State's revisions discussed in this notice is received by the end of the comment period. If an adverse comment is received, EPA will publish either (1) a withdrawal of this immediate final rule or (2) a notice containing a response to the comment which either affirms that the immediate final decision takes effect or reverses the decision.

C. Decision

I conclude that Mississippi's application for program revision meets all of the statutory and regulatory requirements established by RCRA. Accordingly, Mississippi is granted final authorization to operate its hazardous waste program as revised.

Mississippi now has responsibility for permitting treatment, storage, and disposal facilities within its borders and carrying out other aspects of the RCRA program, subject to the limitations of its program revision application and previously approved authorities. Mississippi also has primary enforcement responsibilities, although EPA retains the right to conduct inspections under section 3007 of RCRA and to take enforcement actions under section 3008, 3013 and 7003 of RCRA.

Compliance with Executive Order 12291

The Office of Management and Budget has exempted this rule from the requirements of section 3 of Executive Order 12291.

Certification Under the Regulatory Flexibility Act

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this authorization will not have a significant economic impact on a substantial number of small entities. This authorization effectively suspends the applicability of certain Federal regulations in favor of Mississippi's program, thereby eliminating duplicative requirements for handlers of hazardous

waste in the State. It does not impose any new burdens on small entities. This rule, therefore, does not require a regulatory flexibility analysis.

List of Subjects in 40 CFR Part 271

Administrative practice and procedure, Confidential business information, Hazardous materials transportation, Hazardous waste, Indian lands, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Water pollution control, Water supply.

Authority: This notice is issued under the authority of Sections 2002(a), 3006 and 7004(b) of the Solid Waste Disposal Act as amended (42 U.S.C. 6912(a), 6926, 6974(b)).

Dated: July 26, 1990.

Greer C. Tidwell,

Regional Administrator.

[FR Doc. 90-18854 Filed 8-9-90; 8:45 am]

BILLING CODE 6560-50-M

GENERAL SERVICES ADMINISTRATION

41 CFR Part 101-38

[FPMR Temp. Reg. G-48, Supp. 3]

Federal Property Management; Federal Motor Vehicle Expenditure Control

AGENCY: Federal Supply Service, GSA.

ACTION: Temporary regulation.

SUMMARY: The Office of Management and Budget (OMB) has established the end of fiscal year 1990 as the completion date for studies required by title XV, subtitle C—Federal Motor Vehicle Expenditure Control, Public Law 99-272, Consolidated Omnibus Budget Reconciliation Act of 1985. FPMR Temporary Regulation G-48, dated August 6, 1986, implemented the provisions of this law. This supplement extends the expiration date of FPMR Temp. Reg. G-48 and supplements 1 and 2 thereto to June 30, 1991.

DATES: Effective date: July 1, 1990.

Expiration date: June 30, 1991.

FOR FURTHER INFORMATION CONTACT:

Mr. Michael W. Moses, Sr., Fleet Management Division (703-557-1273).

SUPPLEMENTARY INFORMATION: The General Services Administration has determined that this rule is not a major rule for the purposes of Executive Order 12291 of February 17, 1981, because it is not likely to result in an annual effect on the economy of \$100 million or more; a major increase in costs to consumers or others; or significant adverse effects. The General Services Administration has based all administrative decisions

underlying this rule on adequate information concerning the need for and consequences of this rule; has determined that the potential benefits to society from this rule outweigh the potential costs and has maximized the net benefits; and has chosen the alternative approach involving the least net cost to society.

List of Subjects in 41 CFR Part 101-38

Government property management, Motor vehicles.

Accordingly, 41 CFR chapter 101 is amended as set forth below.

The authority citation for part 101-38 continues to read as follows:

Authority: Section 205(c), 63 Stat. 390; 40 U.S.C. 486(c). In 41 CFR chapter 101, supplement 3 to FPMR Temp. Reg. G-48 is added to the appendix at the end of subchapter G to read as follows:
July 2, 1990.

Federal Property Management Regulations Temporary Regulation G-48 Supplement 3

To: Heads of Federal agencies

Subject: Federal motor vehicle expenditure control

1. **Purpose.** This supplement extends the expiration date of FPMR Temporary Regulation G-48.

2. **Effective date.** This supplement is effective on July 1, 1990.

3. **Expiration date.** This supplement expires June 30, 1991, unless sooner superseded or canceled.

4. **Background.** FPMR Temporary Regulation G-48, dated August 6, 1986, implemented the provisions of title XV, subtitle C—Federal Motor Vehicle Expenditure Control, Public Law 99-272, Consolidated Omnibus Budget Reconciliation Act of 1985. The law and the regulation require agencies which operate 300 or more motor vehicles to take several actions regarding their motor vehicle operations and activities. Since the issuance of supplement 2 to FPMR Temp. Reg. G-48, the Office of Management and Budget (OMB) has established the completion date for the cost comparison studies as the end of fiscal year 1990. To allow time for analysis and review of agency efforts and to determine what changes are needed to codify a permanent regulation, it is necessary to extend the expiration dates of FPMR Temp. Reg. G-48 and supplements 1 and 2 thereto to June 30, 1991.

5. **Explanation of changes.** The expiration dates in paragraph 3 of FPMR Temp. Reg. G-48 and supplements 1 and 2 of FPMR Temp. Reg. G-48 are extended to June 30, 1991.

Dated: July 2, 1990.

Richard G. Austin,

Administrator of General Services.

[FR Doc. 90-18576 Filed 8-9-90; 8:45 am]

BILLING CODE 6820-24-M

41 CFR Part 101-41

[FPMR Temp. Reg. G-53, Supp. 1]

Submission of Paid Freight Bills/ Invoices, Commercial Bills of Lading, Government Transportation Requests, Passenger Coupons, and Supporting Documentation Covering Transportation Services Under Cost- Reimbursement Contracts

AGENCY: Federal Supply Service, GSA.

ACTION: Temporary regulation.

SUMMARY: FPMR Temporary Regulation G-53 implemented the requirement for agencies to ensure that contractors doing business with the Government under a cost-reimbursement contract submit Government Transportation Requests and passenger coupons to GSA for audit. This supplement extends the expiration date of FPMR Temporary Regulation G-53 to April 20, 1991, to allow sufficient time for conversion to a final rule.

DATES: Effective date: April 20, 1990.

Expiration date: April 20, 1991.

FOR FURTHER INFORMATION CONTACT:

John W. Sandfort, Regulations, Procedures, and Policy Branch (FWP), Office of Transportation Audits, Washington, DC 20405, telephone FTS 241-3065 or commercial (202) 501-3065.

SUPPLEMENTARY INFORMATION: The General Services Administration (GSA) has determined that this rule is not a major rule for the purposes of Executive Order 12291 of February 17, 1981, because it is not likely to result in an annual effect on the economy of \$100 million or more; a major increase in costs to consumers or others; or significant adverse effects. GSA has based all administrative decisions underlying this rule on adequate information concerning the need for, and consequences of, this rule; has determined that potential benefits to society from this rule outweigh the potential costs and has maximized the net benefits; and has chosen the alternative approach involving the least net cost to society.

List of Subjects in 41 CFR Part 101-41

Accounting, Air carriers, Claims, Freight, Freight forwarders, Maritime carriers, Passenger services, Railroads, Transportation.

Accordingly, 41 CFR chapter 101 is amended as set forth below.

PART 101-41—[AMENDED]

The authority citation for part 101-41 continues to read as follows:

Authority: 31 U.S.C. 3726 and 40 U.S.C. 486(c).

In title 41 of the Code of Federal Regulations, supplement 1 to FPMR Temp. Reg. G-53 is added to the appendix at the end of subchapter G to read as follows:

July 2, 1990.

Federal Property Management Regulations, Temporary Regulation G-53, Supplement 1

To: Heads of Federal agencies

Subject: Submission of paid freight bills/invoices, commercial bills of lading, Government Transportation Requests, passenger coupons, and supporting documentation covering transportation services under cost-reimbursement contracts

1. *Purpose.* This supplement extends the expiration date of FPMR Temp. Reg. G-53.

2. *Effective date.* This supplement is effective April 20, 1990.

3. *Expiration date.* This supplement expires April 20, 1991, unless sooner canceled or revised.

4. *Explanation of change.* The expiration date in paragraph 3 of FPMR Temp. Reg. G-53 is extended to April 20, 1991.

Dated: July 2, 1990.

Richard G. Austin,

Administrator of General Services.

[FR Doc. 90-18575 Filed 8-9-90; 8:45 am]

BILLING CODE 6820-24-M

FEDERAL EMERGENCY MANAGEMENT AGENCY

44 CFR Part 62

RIN 3067-AB60

National Flood Insurance Program; Financial Assistance/Subsidy Arrangement

AGENCY: Federal Insurance Administration (FIA), Federal Emergency Management Agency (FEMA).

ACTION: Interim rule with request for comments.

SUMMARY: This interim rule adds provisions—through an Addendum to the Financial Assistance/Subsidy Arrangement (the Arrangement) which Write-Your-Own (WYO) companies can voluntarily sign—for modifying the Arrangement beginning with the term of October 1, 1990, through September 30, 1991, in regard to the amount of the written premium which WYO Companies may withhold—as the base commission allowance—during the Arrangement Year and in regard to revisions to the loss adjustment fee schedule. This interim rule is necessary to modify the arrangement to make the changes which are needed (1) to reduce after-the-fact adjustments to retained

commission allowance amounts and (2) to increase the loss adjustment fee schedule to bring the fees in line with fees in related property insurance lines of business and thus ensure the NFIP's ability to continue to attract needed loss adjustment resources.

DATES: *Effective date:* This interim rule is effective upon publication. The Addendum, when fully executed, is applicable for the entire term of the 1990-1991 Financial Assistance/Subsidy Arrangement Year and must be accepted by telegraphed or mailed notice of acceptance to the Federal Insurance Administrator (the Administrator) prior to midnight EDT September 30, 1990, and is effective with respect to covered losses sustained on October 1, 1990, and later.

Comment date: Comments accepted until September 10, 1990.

ADDRESSES: Send comments or inquiries to Rules Docket Clerk, Office of General Counsel, room 840, Federal Emergency Management Agency, 500 C Street SW., Washington, DC 20472.

FOR FURTHER INFORMATION CONTACT: Donald L. Collins, Federal Emergency Management Agency, Federal Insurance Administration, 500 C Street SW., Washington, DC 20472; telephone number (202) 646-3419.

SUPPLEMENTARY INFORMATION: The Write-Your-Own (WYO) Program (established in 1983) was authorized pursuant to subpart C, part 62 of the National Flood Insurance Program (NFIP) regulations and section 1310 of the National Flood Insurance Act of 1968, as amended (the Act) (Pub. L. 90-448, 42 U.S.C. 4001, et seq.).

Under the WYO Program, the Standard Flood Insurance Policy (the form and substance of which is approved by the Administrator) may be issued in their own names by insurers signatory to Financial Assistance/Subsidy Arrangements. Insurers then are responsible for all aspects of service, including policy issuance to new policyholders and to policyholders insured by them under other lines of property insurance; endorsement and renewal of policies; and the adjustment of claims brought under the policies. The insurers retain a specified amount of the premium for their expenses, including the commissions of agents. Under the Arrangement, the Government provides such additional funds as may be required, over and above the net premium income, for the payment of claims.

Once the Arrangement is signed by the authorized official of the private insurer and the Government, it is effective at the beginning of the

Government's Fiscal Year on October 1 and runs through the following September 30. Also, in accordance with Article V—Commencement and Termination of the Arrangement, the Federal Insurance Administration (FIA) is required, by June 1 of each year, to publish in the Federal Register the terms for the re-subscription of the Arrangement for the next Arrangement Year.

The Notice of Offer for Arrangement Year 1990-1991 was published in the Federal Register on May 22, 1990 (Vol. 55, Page 21164). The Financial Assistance/Subsidy Arrangement has been incorporated into the Federal Regulations for the NFIP since 1985, and the Notice is verbatim with what is set out as appendix A to 44 CFR part 62.

Under the current commission allowance provisions set forth at paragraph B in Article III of the Arrangement (which were effective in October 1988), the Company is entitled to 14% of the Company's written premiums as the base commission allowance, and, further, is entitled to a 0.1% additional commission allowance for each 1% growth in the Company's policies in force, up to a potential total of 17%. Because this commission allowance formula was a charge from the previous commission allowance of a "flat 15%," of the Company's written premiums, the Company was given the option of withholding 15% of written premiums in anticipation of an after-the-fact adjustment, up or down. The Federal Emergency Management Agency (FEMA) has now determined that there is no longer a need to allow the 15% election as a transition from the previous commission allowance provisions, and instead plans to require a Company to elect the 14% base commission retention if the Company has not qualified for a commission allowance of 15% or more for the Arrangement Year ended September 30, 1989, and the Company elects to opt for a revision to the loss adjustment fee schedule.

Regarding the loss adjustment fee schedule, the current schedule of fees allowable under the NFIP for the adjustment of flood insurance claims was established on June 1, 1984. This fee schedule is applicable to the adjustment of claims for policies issued by the NFIP for its direct business as well as for those policies issued by private insurers under the WYO Program. The current fee schedule is shown in Exhibit A of the Arrangement.

Starting in early 1989, in accordance with section 1311(a) of the 1968 Act, FEMA began to solicit information from

NFIP's community of WYO Companies and independent claims adjustment organizations regarding the appropriateness of the current schedule of allowable loss adjustment costs. The results of these efforts led to the conclusion that, to enable the NFIP to continue to attract needed loss adjustment resources, the fee schedule should be revised upward because: (1) The adjustment of flood insurance claims has generally become more complex over time as changes have occurred (a) related to coverage restrictions in elevated buildings and basements, (b) related to claims for erosion benefits processed under section 1306(c) of the Act, as amended by section 544 of the Housing and Community Development Act of 1987, and (8c) related to claims involving condominium losses under Condominium Master Policies (which were introduced January 1, 1989); (2) loss adjustment operating costs have increased since 1984; and (3) the current fee schedule is not in line with fees in related property insurance lines of business.

As these two changes, involving the commission allowance and the fee schedule for loss adjustment expenses, were not included in the Notice of Offer for Arrangement Year 1990-1991 published on May 22, 1990, these changes are included in this Addendum to the Financial Assistance/Subsidy Arrangement and are offered as an option for the 1990-1991 Arrangement to those Companies who voluntarily agree to both of these new conditions by signing the Addendum. Those Companies choosing not to sign the Addendum will have no change to the provisions contained in the Notice of Offer.

Because the conditions contained in the Addendum will apply at the option of the individual Company, and because the commission allowance provision does not change the commission to which the Company is ultimately entitled, and because the upward adjustment to the fee schedule for loss adjustment expenses in fact increases the fees received by the Company under the Arrangement, FEMA believes that sufficient cause exists for making this rule effective immediately and that delaying the effective date until after a comment period would be impracticable and contrary to the public interest since such action would not allow Companies sufficient time to elect this option by October 1, 1990. However, comments are requested and will be considered before further regulations are issued. It is contemplated that the commission

allowance and loss adjustment fee schedule provisions of the Arrangement will be amended by future rulemaking so that the Addendum will not be necessary for Arrangement Years after 1990-1991.

Publication of the Addendum in this interim rule also constitutes the Administrator's offer to enter into the Addendum with WYO Companies for the Arrangement Year 1990-1991.

FEMA has determined that this action will have minimal or no effect on environmental quality and therefore, in accordance with 44 CFR 10.8(c)(2)(i), is categorically excluded from the requirement to prepare an environmental assessment or environmental impact statement.

This interim rule will not have a significant economic impact on a substantial number of small entities and has not undergone a regulatory flexibility analysis.

This interim rule is not a "major rule" as defined in Executive Order 12291, dated February 27, 1981, and, hence, no regulatory analysis has been prepared.

FEMA has determined that this rule does not contain a collection of information requirement as described in section 3504(h) of the Paperwork Reduction Act.

List of Subjects in 44 CFR Part 62

Flood insurance.

Accordingly, subchapter B of chapter 1 of title 44 is amended as follows:

PART 62—SALE OF INSURANCE AND ADJUSTMENT OF CLAIMS

1. The authority citation for part 62 continues to read as follows:

Authority: 42 U.S.C. 4001; *et seq.*; Reorganization Plan No. 3 of 1978; E.O. 12127.

APPENDIX A—[AMENDED]

2. Following section 62.23, appendix A to part 62 is amended by adding—at the end an Optional Addendum to read, as follows:

Optional Addendum Amending the Commission Allowance and Adjuster Fee Schedule Provisions of the Financial Assistance/Subsidy Arrangement ("Arrangement") for 1990-1991, Between _____ (the "Company") and the Federal Emergency Management Agency ("FEMA")

Whereas, the Company has executed a Notice of Acceptance of a Notice to Offer by FEMA to enter into an Arrangement for the term of October 1, 1990 through September 30, 1991, which, pursuant to Article V, shall be effective upon execution by authorized officials of the Company and FEMA; and

Whereas, the last revision to the commission allowance effective October 1,

1988, and included in the Financial Assistance/Subsidy Arrangement for 1990-1991, included a formula for providing the Company—in addition to the base commission allowance of 14%—additional commission allowance based on the growth in the Company's policies in force at the end of the prior Arrangement Year and further provided the Company with the option of retaining 15% of the Company's written premium during the Arrangement Year with an adjustment up or down being made at the end of the Arrangement Year based on its actual policy growth; and

Whereas, FEMA has determined the need to allow the 15% election is no longer justified or warranted; and

Whereas, the current fee schedule for allocated loss adjustment expense, as shown in Exhibit A of the Arrangement, has been in effect since June 1, 1984; and

Whereas, FEMA has, in accordance with section 1311(a) of the National Flood Insurance Act of 1968, solicited information from the NFIP community of WYO Companies and independent claims adjustment organizations regarding the appropriateness of the current schedule of allowable loss adjustment costs and, as a result, determined that the fee schedule should be revised upward, as shown as Optional Exhibit A of the Arrangement.

Now, therefore, the Company and FEMA agree:

That if the Company has not qualified for a commission allowance of 15% or more, based on its growth in policies in force for the Arrangement Year ending September 30, 1989, the Company will withhold 14% of the Company's written premium during this Arrangement Year in lieu of the 15% stipulated in the second paragraph of Article III. B. of the Arrangement; and

That allocated loss adjustment expenses shall be reimbursed to the Company pursuant to Optional Exhibit A in the Arrangement, entitled "Fee Schedule (Optional)"; and

That the Company agrees by signing this Addendum to the Arrangement that all individual companies within the Company Group will be subject to the conditions of this Addendum.

In witness whereof, the parties hereto have executed this Addendum to the Arrangement for 1990-1991 on this _____ day of _____, 1990.

The United States of America
Federal Emergency Management Agency

By: _____
Federal Insurance Administrator

Company

By: _____

Title: _____

On behalf of the Company(ies) named below:

Address of the Company

Notice of Acceptance of the Optional
Addendum Amending the Commission
Allowance and Adjuster Fee Schedule

**Provisions of the Financial Assistance/
Subsidy Arrangement ("Arrangement") for
1990-1991**

Whereas, in 1990, there was published an Addendum to the Financial Assistance/
Subsidy Arrangement for 1990-1991
(hereafter the Arrangement).

Whereas, the above cited Addendum, as published in and reprinted from the Federal Register, does not provide sufficient space to type in the name of the Company.

Whereas, the Addendum may include several individual companies within a Company Group and the Addendum as published in and reprinted from the Federal Register does not provide sufficient space to type in a list of companies.

Therefore, the parties hereby agree that this Notice of Acceptance form is incorporated into and is an integral part of the Addendum to the Arrangement and is substituted in place of the signature block contained in the Federal Register for the Addendum. The above-mentioned Addendum is effective in the States in which the insurance company(ies) listed below is (are) duly licensed to engage in the business of property insurance:

In witness whereof, the parties hereto have accepted this Addendum to the Arrangement for 1990-1991 on this _____ day of _____, 1990.

By: _____
Title: _____

The United States of America
Federal Emergency Management Agency
By: _____

Title: Federal Insurance Administrator _____

FEE SCHEDULE (OPTIONAL)

[Optional Exhibit A]

Range (by covered loss)	Fee
Erroneous Assignment.....	\$40.00
Closed Without Payment.....	125.00
Minimum for Upton-Jones Claims.....	800.00
\$0.01 to \$600.00.....	150.00
\$600.01 to \$1,000.00.....	175.00
\$1,000.01 to \$2,000.00.....	225.00
\$2,000.01 to \$3,500.00.....	275.00
\$3,500.01 to \$5,000.00.....	350.00
\$5,000.01 to \$7,000.00.....	425.00
\$7,000.01 to \$10,000.00.....	500.00
\$10,000.01 to \$15,000.00.....	550.00
\$15,000.01 to \$25,000.00.....	600.00
\$25,000.01 to \$35,000.00.....	675.00
\$35,000.01 to \$50,000.00.....	750.00
\$50,000.01 to \$100,000.00.....	1,000.00
\$100,000.01 to \$150,000.00.....	1,300.00
\$150,000.01 to \$200,000.00.....	1,600.00
\$200,000.01 to limits.....	2,000.00

Allocated fee schedule entry value is the covered loss under the policy based on the standard deductibles (\$500 and \$500) and limited to the amount of insurance purchased.

Dated: August 3, 1990.

Harold T. Duryee,

Federal Insurance Administrator.

[FR Doc. 90-18826 Filed 8-7-90; 7:38 am]

BILLING CODE 6718-05-M

44 CFR Part 64

[Docket No. FEMA 6885]

**List of Communities Eligible for the
Sale of Flood Insurance; Ohio et al.**

AGENCY: Federal Emergency
Management Agency.

ACTION: Final rule.

SUMMARY: This rule lists communities participating in the National Flood Insurance Program (NFIP). These communities have applied to the program and have agreed to enact certain floodplain management measures. The communities' participation in the program authorizes the sale of flood insurance to owners of property located in the communities listed.

EFFECTIVE DATES: The dates listed in the fourth column of the table.

ADDRESSES: Flood insurance policies for property located in the communities listed can be obtained from any licensed property insurance agent or broker serving the eligible community, or from the National Flood Insurance Program (NFIP) at: Post Office Box 457, Lanham, Maryland 20706, Phone: (800) 638-7418.

FOR FURTHER INFORMATION CONTACT: Frank H. Thomas, Assistant Administrator, Office of Loss Reduction, Federal Insurance Administration, (202) 646-2717, Federal Center Plaza, 500 C Street SW., room 417, Washington, DC 20472.

SUPPLEMENTARY INFORMATION: The National Flood Insurance Program (NFIP), enables property owners to purchase flood insurance at rates made reasonable through a Federal subsidy. In return, communities agree to adopt and administer local floodplain management measures aimed at protecting lives and new construction from future flooding. Since the communities on the attached list have recently entered the NFIP, subsidized flood insurance is now available for property in the community.

In addition, the Director of the Federal Emergency Management Agency has identified the special flood hazard areas in some of these communities by publishing a Flood Hazard Boundary Map. The date of the flood map, if one has been published, is indicated in the fifth column of the table. In the communities listed where a flood map has been published, Section 102 of the Flood Disaster Protection Act of 1973, as amended, requires the purchase of flood insurance as a condition of Federal or federally related financial assistance for acquisition or construction of buildings in the special flood hazard area shown on the map.

The Director finds that the delayed effective dates would be contrary to the public interest. The Director also finds that notice and public procedure under 5 U.S.C. 553(b) are impracticable and unnecessary.

The Catalog of Domestic Assistance Number for this program is 83.100 "Flood Insurance."

Pursuant to the provisions of 5 U.S.C. 605(b), the Administrator, Federal Insurance Administration, to whom authority has been delegated by the Director, Federal Emergency Management Agency, hereby certifies that this rule, if promulgated will not have a significant economic impact on a substantial number of small entities. This rule provides routine legal notice stating the community's status in the NFIP and imposes no new requirements or regulations on participating communities.

List of Subjects in 44 CFR Part 64

Flood insurance, Floodplains.

PART 64—[AMENDED]

1. The authority citation for part 64 continues to read as follows:

Authority: 42 U.S.C. 4001 et seq., Reorganization Plan No. 3 of 1978, E.O. 12127.

2. Section 64.6 is amended by adding in alphabetical sequence new entries to the table.

In each entry, a complete chronology of effective dates appears for each listed community. The entry reads as follows:

§ 64.6 List of eligible communities.

State and location	Community No.	Effective date of authorization/cancellation of sale of flood insurance in community	Current effective map date
New Eligibles—Emergency Program			
Ohio: Balitmore, Village, of Fairfield County	500170	June 28, 1990, Emerg	4-16-76

State and location	Community No.	Effective date of authorization/cancellation of sale of flood insurance in community	Current effective map date
Georgia: Tunnel Hill, Town of, Whitfield County	130489	do	10-6-78
Iowa: Tiffin, City of, Johnson County	190173	June 29, 1990, Emerg	4-26-83
Arkansas: Crawford County, Unincorporated Areas	050428	do	6-17-77
Texas: Hickory Creek, Town of, Denton County	481150	July 3, 1990, Emerg	7-30-76
Indiana: Martin County, Unincorporated Areas	180479	do	9-4-81
Illinois: Arcola, City of, Douglas County	171021	July 23, 1990, Emerg	
North Carolina: Alexander County, Unincorporated Areas	370398	do	6-9-78
Arkansas: Columbia County, Unincorporated Areas	050425	July 19, 1990	8-2-77
Ohio: Cortland, City of, Trumbull County	390623	July 25, 1990	10-8-78
New Eligibles—Regular Program			
Ohio: Bethesda, Village of, Belmont County	390674	July 13, 1990	9-18-87
Reinstatements—Regular Program			
Vermont: Salisbury, Town of, Addison County	500170	May 12, 1975, Emerg; November 1, 1985, Reg; June 18, 1990, Susp; July 2, 1990, Rein.	11-1-85
Pennsylvania:			
Amity, Township of, Erie County	421360	August 6, 1975, Emerg; November 4, 1988, Reg; November 4, 1988, Susp; July 3, 1990, Rein.	11-4-88
South Fayette, Township of, Allegheny County	421106	October 30, 1974, Emerg; February 3, 1982, Reg; August 3, 1989, Susp; July 10, 1990, Rein.	2-3-82
New York: Dix, Town of, Schuylar County	360746	June 30, 1980, Emerg; October 29, 1982, Reg; May 17, 1988, Susp; July 11, 1990, Rein.	10-29-82
Maine: Gardiner, City of, Kennebec County	230068	February 27, 1975, Emerg; May 15, 1980, Reg; May 17, 1990, Susp; July 19, 1990, Rein.	5-15-80
Pennsylvania:			
Ogle, Township of, Somerset County	422052	April 23, 1976, Emerg; May 17, 1990, Reg; May 17, 1990, Susp; July 19, 1990, Rein.	5-17-90
Brockway, Borough of, Jefferson County	420509	January 17, 1974, Emerg; July 3, 1990, Reg; July 3, 1990, Susp; July 20, 1990, Rein.	7-3-90
Buffington, Township of, Indiana County	421711	March 3, 1977, Emerg; August 1, 1986, Reg; August 1, 1986, Susp; July 20, 1990, Rein.	8-1-86
North Dakota:			
Moran, Township of, Richland County	380666	March 10, 1983, Emerg; September 18, 1986, Reg; September 6, 1989, Susp; July 23, 1990, Rein.	9-18-86
Stavanger, Township of, Traill County	380642	February 29, 1980, Emerg; August 5, 1986, Reg; September 6, 1989, Susp; July 23, 1990, Rein.	8-5-86
Iowa: Oxford Junction, City of, Jones County	190177	June 23, 1975, Emerg; August 19, 1985, Reg; August 19, 1985, Susp; July 23, 1990, Rein.	8-19-85
Texas: Lavaca County, Unincorporated Area	481178	October 8, 1981, Emerg; September 1, 1987, Reg; September 1, 1987, Susp; July 27, 1990, Rein.	9-1-87
Ohio:			
Rock Creek, Village of, Ashtabula County	390665	August 7, 1975, Emerg; July 7, 1978, Reg; April 2, 1990, Susp; July 31, 1990, Rein.	7-7-78
Hamden, Village of, Vinton County	390554	August 13, 1979, Emerg; September 29, 1989, Reg; September 29, 1989, Susp; October 9, 1989, Rein; May 17, 1990, Susp; July 25, 1990, Rein.	9-29-89
Vermont: Clarendon, Town of, Rutland County	500093	November 14, 1975, Emerg; November 19, 1980, Reg; June 4, 1990, Susp; July 31, 1990, Rein.	11-19-80
Region III—Regular Program Conversions			
Pennsylvania:			
Clinton, Township of, Wyoming County	422197	July 3, 1990, Suspension Withdrawn	7-3-90
Clover, Township of, Jefferson County	422442	do	7-3-90
Coal, Township of, Northumberland County	421936	do	7-3-90
Falls, Township of, Wyoming County	422198	do	7-3-90
Mehoopany, Township of, Wyoming County	422201	do	7-3-90
Monroe, Township of, Wyoming County	421186	do	7-3-90
Nesquehoning, Borough of, Carbon County	420252	do	7-3-90
Newton, Township of, Lackawanna County	421756	do	7-3-90
Summerville, Borough of, Jefferson County	420514	do	7-3-90
Windham, Township of, Bradford County	421409	do	7-3-90
Winslow, Township of, Jefferson County	421215	do	7-3-90
Region IV			
Mississippi: Jefferson County, Unincorporated Areas	280214	do	7-3-90
Region VII			
Kansas: Medicine Lodge, City of, Barber County	200015	do	7-3-90
Region I—Regular Program Conversions			
Maine:			
Alfred, Town of, York County	230191	July 16, 1990, Suspension Withdrawn	7-16-90
Cushing, Town of, Knox County	230224	do	7-16-90
Friendship, Town of, Knox County	230225	do	7-16-90
Leeds, Town of, Androscoggin County	230003	do	7-16-90
South Bristol, Town of, Lincoln County	230220	do	7-16-90
Woolwich, Town of, Sagadahoc County	230210	do	7-16-90
Connecticut: Middletown, City of, Middlesex County	090068	do	7-16-90
Region II			
New York: Jeffersonville, Village of, Sullivan County	361474	do	7-16-90

State and location	Community No.	Effective date of authorization/cancellation of sale of flood insurance in community	Current effective map date
Region III			
Pennsylvania:			
Greenfield, Township of, Lackawanna County	422456	.....do.....	7-16-90
Quincy, Township of, Franklin County	421655	.....do.....	7-16-90
St. Thomas, Township of, Franklin County	421656	.....do.....	7-16-90
Topton, Borough of, Berks County	420154	.....do.....	7-16-90
Wayne, Township of, Crawford County	421576	.....do.....	7-16-90
Wilmot, Township of, Bradford County	421124	.....do.....	7-16-90
Wyalusing, Borough of, Bradford County	420180	.....do.....	7-16-90
Wyalusing, Township of, Bradford County	421126	.....do.....	7-16-90
Region IV			
Georgia: Meriwether County, Unincorporated Areas	130473	.....do.....	7-16-90
Region VI			
New Mexico: Estancia, Town of, Torrance County	350082	.....do.....	7-16-90
Region VII			
Iowa:			
Bremer County, Unincorporated Areas	190847	.....do.....	7-16-90
Denver, City of, Bremer County	190026	.....do.....	7-16-90
Janesville, City of, Bremer and Black Hawk Counties	190023	.....do.....	7-16-90
Sumner, City of, Bremer County	190029	.....do.....	7-16-90
Waverly, City of, Bremer County	190030	.....do.....	7-16-90
Plainfield, City of, Bremer County	190327	.....do.....	7-16-90
Missouri:			
Warrensburg, City of, Johnson County	290194	.....do.....	7-16-90
Warsaw, City of, Benton County	290030	.....do.....	7-16-90
Region IX			
Arizona: Prescott Valley, Town of, Yavapai County	040121	.....do.....	7-16-90

Code for reading fourth column:

Emerg.—Emergency
Reg.—Regular
Susp.—Suspension
Rein.—Reinstatement

Issued: August 1, 1990.

Harold T. Duryee,

Administrator, Federal Insurance
Administration.

[FR Doc. 90-18827 Filed 8-9-90; 8:45 am]

BILLING CODE 6718-21-M

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 76

[MM Docket No. 89-600; FCC 90-276]

Broadcast Services; Cable Television Inquiry

AGENCY: Federal Communications
Commission.

ACTION: Policy statement.

SUMMARY: The Commission reports its findings and recommendations in an inquiry into the state of the cable television industry. Through this action, the Commission complies with a directive included in the Cable Communications Policy Act of 1984 to conduct a study of the cable industry's operations under the Act and, based on the study results, to prepare and submit a report to Congress by October 28, 1990. These findings and recommendations are detailed in the synopsis below. The action is taken to

fulfill the Commission's Congressional mandate and to close the proceeding.

EFFECTIVE DATE: Effective August 10, 1990.

ADDRESSES: Federal Communications Commission, Washington, DC 20554.

FOR FURTHER INFORMATION CONTACT: David E. Horowitz at (202) 632-7792, or Scott Roberts at (202) 632-6302, Mass Media Bureau, Policy and Rules Division.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Commission's *Report* in MM Docket No. 89-600, adopted July 26, 1990, and released July 31, 1990. The full text of this *Report* is available for inspection and copying during normal business hours in the FCC Dockets Branch (room 230), 1919 M Street, NW., Washington, DC, and also may be purchased from the Commission's copy contractor, International Transcription Services, (202) 857-3800, 2100 M Street, NW., Suite 140, Washington, DC 20037.

Synopsis of Report

1. This *Report* has been prepared and is being submitted to the Congress pursuant to the requirements of the Cable Communications Policy Act of 1984 ("Cable Act"). Congress enacted the Cable Act to establish a franchise process that would encourage the growth and development of cable

systems and to encourage cable systems to provide the widest possible diversity of information sources and services to the public. The Cable Act was designed to promote competition in cable communications and minimize unnecessary regulation that would impose an undue economic burden on cable systems. To assist in a review of marketplace developments in the six years following enactment of the Cable Act, Congress gave the Federal Communications Commission ("FCC" or "Commission") a mandate to prepare a report and make appropriate recommendations regarding cable rate regulation, based on a study of the effect of competition in the marketplace.

2. Responding to the statutory mandate, this *Report* finds that the six years since enactment of the Cable Act—and particularly the three and one-half years since widespread rate deregulation began thereunder—have witnessed a significant and ongoing transformation of the video marketplace. The Cable Act sought cable industry growth, and the number of communities and homes served by cable has increased significantly. The Cable Act sought cable industry development, and cable has further developed its multichannel services beyond retransmission, changing the

expectations of most Americans about television viewing options. The Cable Act also sought competition to cable operators, however, and the competition within the video industry is just beginning to expand and include alternative multichannel providers. Thus, the cable industry, and the newer alternative multichannel video providers beginning to compete with cable, are still evolving.

3. The growth and development that the cable industry has experienced since the Cable Act are readily measurable. First, the cable industry has invested in expanding its plant to the point where it now offers multichannel video service to about 90 percent of Americans; before the Cable Act, cable was available to about 70 percent of American households. Second, the cable industry has significantly expanded its channel capacity—now offering substantially greater viewing choices to the American public. While almost 60 percent of all cable subscribers were served by cable systems with at least 30 channels before the Cable Act, that number has grown to about 90 percent of cable subscribers today. The cable industry has significantly increased its annual investment in new and expanded capacity by 55 percent, from \$1.1 billion in 1984 to \$1.7 billion in 1989. Third, the cable industry has launched numerous new programming services and original programs. Indeed, the number of cable programming services has doubled since the Cable Act. The cable industry has tripled annual spending on programming from \$302 million to \$965 million during this same period. Fourth, we note that cable industry revenue has more than doubled from \$8.5 billion in 1984 to \$17.7 billion in 1989; the portion of cable's revenues derived from advertising has more than tripled from \$594 million to over \$2 billion.

4. The American public has clearly welcomed the wider viewing options that the cable industry has provided. The number of cable subscribers has grown from 37 million in 1984 to 53 million in 1989; however, penetration of homes passed has remained between 61–63 percent during this period. Overall audience ratings for basic cable programming services have doubled since 1984, now exceeding, on average, the total all-day audience share of any major television network affiliate.

5. Congress intended to free cable operators from the constraints of unnecessary local rate regulation, subject to an appropriate definition of "effective competition" to be adopted by the Commission. The Cable Act was designed, *inter alia*, to allow the

substantial investments necessary for expanded system capacity and new programming—and these have occurred. Despite the substantial investment in expanded capacity and programming made possible by deregulation under the Cable Act, however, many cable subscribers have complained about the significant cable rate increases which have accompanied this expanded service. Deregulated rates for the lowest price tier of cable service have risen faster than the general rate of inflation, although the percentage of annual rate increases has begun to decline (to about eight and one-half percent in 1988 and 1989) since their initial 15.5 percent jump in 1987. Furthermore, increases in the average subscriber's total monthly bill (including premium services and equipment) have also slowed to only slightly above the general rate of inflation, with the average subscriber's bill rising 5.4 percent in 1989 (after roughly seven percent increases in 1987 and 1988). The data collected on rate increases are inconclusive on the issue of market power, however, in the absence of information about costs.

6. Notwithstanding the fact that rate adjustments may have been an anticipated consequence of deregulation, a number of subscribers and municipalities have expressed alarm about especially sharp rate hikes. Sometimes these increases have amounted to more than a doubling of basic rates in a relatively short period. Coupled with rising frustration over the poor quality of technical and customer service some subscribers have received from their local cable operators, such rate increases have fueled broader concerns that cable operators exercise market power.

7. In addition to these complaints about rates and service since the Cable Act, existing or emerging competitors to cable allege anticompetitive developments and conduct in the cable industry. These charges have focused on the increasing concentration of ownership in the cable industry and on cable industry relationships with program providers, with developing competitors, and with the broadcast industry. Our undertaking of this *Report* thus coincides with a growing sense, among various interested parties, subscribers, and their legislators, that the time is ripe to review both the progress of the cable industry and the legal framework under which it operates.

8. The goal of this *Report* is to provide Congress with information on the state of the cable television industry and to recommend ways to ensure diversity

and consumer choice in a changing local video marketplace. As the *Report* reveals, this Commission steadfastly believes that robust competition will more efficiently provide both a better safeguard against undue rate increases or service failings and a greater diversity and choice than any web of rules and regulations designed to mimic competition or otherwise compensate for its absence. Where such competition flourishes, government should avoid interceding. Where such competition has yet to thrive, government should tread lightly—seeking to encourage fledgling competitors only so much as to overcome unfair barriers to entry, without suppressing the continued growth and development of successful incumbents. Only where the absence of competition can be explained by a market's natural economics should the government intercede aggressively and embrace extensive ratemaking and other intrusive regulatory measures.

9. This *Report* finds that robust competition in the video marketplace has not yet fully evolved, but that the development of a fully competitive marketplace is possible. Our overall analysis suggests that the video marketplace is a highly dynamic sector in a state of transition. By fulfilling the Cable Act's promise of enhanced choices for the American viewer, the cable industry has generated intense demand for its multichannel service—but in the process of meeting that demand, has accrued some degree of market power. With the developing field of existing and potential multichannel competitors to cable, however—from wireless cable and proposed direct broadcast satellite services to home satellite dishes and satellite master antenna TV operations—and with evidence that even direct competition between cable operators may increasingly occur, we are unwilling to endorse or recommend any drastic or long-term deregulation of cable rates and services. To do so could jeopardize gains made since the Cable Act was adopted. The public interest will instead be promoted by improving the conditions for competition.

10. Accordingly, while we desire to deal effectively with specific anticompetitive abuses, we find in this *Report* no need to encumber the cable industry with a harsh new regulatory regime. Rather, we propose to foster a more competitive marketplace for the distribution of multichannel video services. Our *Report* therefore proposes, first, the removal of certain undue regulatory barriers to multichannel service competition and, second, certain

targeted and generally temporary restraints on certain cable industry practices which directly or indirectly impede such competition. We decline to propose more far-reaching rate regulation of the cable industry; such measures could unnecessarily jeopardize the wealth of viewing choices fostered by the Cable Act and delivered by the cable industry.

11. *Notice of Inquiry.* The Commission launched the study upon which this Report is based on December 12, 1989, adopting a comprehensive *Notice of Inquiry* ("Notice") in MM Inquiry ("Notice") in MM Docket No. 89-600, 55 FR 1484, January 16, 1990. In the *Notice*, we recognized the great strides the cable industry has taken in reshaping the video services market both locally and nationally, along with the significant consumer benefits these developments have brought. At the same time, we acknowledged that consumers, television broadcasters and other video service providers have complained that the cable industry has accrued market power and at times abused it. With the *Notice*, we sought to develop a factual record—reliable evidence and empirical analyses of cable industry conduct and relationships—that would enable us to judge the validity of these concerns. We anticipated that this record would provide the Commission with a reasonable basis for a comprehensive examination of the state of the cable industry today; the impact—positive and negative—that the Cable Act has had in attaining cable's current market development; and whether complaints and charges against the industry were isolated or symptomatic of widespread and fundamental market deficiencies.

12. In response to the *Notice*, we received more than 180 comments and nearly 70 reply comments. To supplement information received in comments and reply comments, we also requested detailed ownership information from the top nine multiple system operators ("MSOs"), conducted three field hearings, requested written responses to follow-up questions after the hearings and sought additional information from other parties. Along with the General Accounting Office ("GAO"), we also conducted survey of cable rates and services of nearly 2,000 cable systems (the "FCC-GAO survey"). In addition, we incorporated into this docket the records of two other related proceedings and two relevant petitions. Finally, we invited commenters to assess the extent to which different outcomes in ten other ongoing Commission proceedings regarding the video marketplace could enhance or

thwart the development of vigorous competition in this market.

13. Based on the record compiled in this and related proceedings, the Commission has reached the following principal findings, which are explained in detail in the remainder of this Report.

(1) Deregulation under the Cable Act has fostered the intended results: increases in investment, with corresponding expansion of cable reach, number of subscribers, channel capacity, and new programming.

(2) The video marketplace continues to be a highly dynamic sector in the midst of transition. Cable television service consists of a unique cluster of services comprised of retransmitted broadcast signals, premium programming, broadcast-like basic cable services, and specialized basic cable network services such as ESPN, CNN, MTV, and BET. Local broadcasters provide varying degrees of competition to cable's retransmission function, and, to a certain extent, to the more broadcast-like basic cable services. Also, video cassette rentals provide significant competition to premium movie services. Although broadcast stations offer some degree of the specialized programming provided by the specialized basic cable network services, they do not provide it full-time. Generally, there is no close substitute for that steadily-expanding complement of specialized program services offered by the typical cable system at this time. Competition from alternative multichannel providers such as second competitive cable systems, wireless cable (MMDS), satellite master antenna TV systems ("SMATV"), and direct broadcast service ("DBS") satellites, while limited at present, is emerging. Indeed, if provided reasonable access to cable programming services, wireless cable, cable overbuilders and SMATV operators have the potential to provide significant competition to cable. In addition, DBS has the potential, in our judgment, to become a strong competitor by the mid-1990s if recently announced plans go forward and DBS can obtain reasonable access to programming.

(3) Following sharp rate increases in the year after rate deregulation, average basic rate increases have moderated and increases in average total monthly bills (including premium services and equipment rental) have slowed recently to a level near the rate of general inflation. Additionally, the per channel price for cable service has increased at a rate significantly lower than inflation during this period. In any event, the rise in rates alone, without cost data, is not conclusive on the question of market

power. That assessment requires analysis of additional factors.

(4) On balance, the evidence submitted in this proceeding suggests that cable operators possess varying degrees of market power in the local distribution of video programming.

(5) Horizontal concentration and vertical integration in the cable industry have increased significantly since enactment of the Cable Act. This growth has brought substantial benefits to American consumers, but also added potential for certain anticompetitive conduct.

(6) Vertically integrated cable operators often have the ability to deny alternative multichannel video providers access to cable programming services in which such cable operators hold ownership interests, and there is considerable anecdotal evidence that some have used this ability in anticompetitive ways.

(7) Most cable operators have the ability to deny or unfairly place conditions on the access of most program services to the cable communities they serve, and evidence suggests that some have done so. This ability reflects some degree of market power in the local video distribution market, which MSOs may leverage on an intermarket basis. It does not demonstrate, however, that national horizontal concentration has yet provided any single MSO with the unilateral ability to preclude the successful launch of new programming services.

(8) Although encouraging leased access programming was a key purpose of the Cable Act, existing enforcement provisions are too cumbersome to permit the development of leased access as a promising force in the video market. The lack of adequate remedies for any programmer denied fair access to local cable distribution has retarded the overall development of leased access programming.

(9) Local franchising requirements often discourage and even forbid competition, for reasons that have little to do with appropriate governmental interests such as public health and safety, repair of public rights-of-way, and construction performance.

(10) The current compulsory copyright and right of retransmission regime for cable creates an imbalance in the relationship between the commercial broadcasting and cable industries. While the current compulsory copyright scheme is designed to reduce transaction costs in providing a cable antenna service, it also serves as an unfair subsidy for cable operators.

(11) Cable and broadcast programming compete for advertising revenues. Cable operators' incentive to deny carriage or to provide disadvantageous carriage (e.g., frequent or ill-timed channel repositioning) to programming services in which they have no financial interest appears to be particularly great as against local broadcasters. This creates a market disadvantage in local commercial broadcasters' ability to compete against cable operators for advertising revenues.

(12) The continued viability of noncommercial television (which by its very nature is affected by market forces in different ways than is commercial broadcasting) may depend on targeted mandatory carriage obligations for multichannel video providers.

(13) The current three-signal standard for effective competition no longer reflects the realities of the video marketplace. It would be inappropriate, in our judgment, for the Commission to alter this standard at this time when Congress is actively considering legislation that would either expressly redefine or moot the effective competition standard for rate regulation. We are concerned, moreover, that redefining the effective competition standard in a way that would impose widespread and extensive rate regulation could unnecessarily undermine the growth in cable services.

(14) A general pattern of problems with cable technical quality and customer service has emerged since the passage of the Cable Act, although the industry has recently launched efforts to deal with customer service problems.

(15) Uniform federal technical standards for all cable video transmissions are essential to address cable technical quality problems and to prevent a patchwork of inconsistent technical standards in franchise agreements. Therefore, the Commission will launch an industry advisory process to that end.

(16) At present, franchising authorities lack adequate enforcement mechanisms to compel cable operators to improve customer service to ensure high-quality service to the public.

In light of our findings, we make the following recommendations:

(1) To encourage more robust competition in the local video marketplace, the Congress should: (a) forbid local franchising authorities from unreasonably denying a franchise to potential competitors who are ready and able to provide service; (b) prohibit franchising rules whose intent or effect is to create unreasonable barriers to the entry of potential competing

multichannel video providers; (c) limit local franchising requirements to appropriate governmental interests (e.g., public health and safety, repair and good condition of public rights-of-way, and the posting of an appropriate construction bond); and (d) permit competitors to enter a market pursuant to an initial, time-limited suspension of any "universal service" obligation.

(2) Congress should remove legal barriers to entry for alternative multichannel providers by prohibiting local governments from regulating installation of reception equipment beyond those provisions reasonably related to clearly defined health, safety or reasonable aesthetic objectives.

(3) Congress should adopt a must carry regime to safeguard local broadcast stations so long as the compulsory copyright license for local broadcast programming exists. This regime, including compulsory copyright, should sunset at the same time as any programming access provisions enacted pursuant to Recommendation (6). Either in the absence of or due to the expiration of any must carry regime, Congress should repeal the cable compulsory license and amend the Communications Act to provide local broadcast stations a clearly defined right to bargain for compensation for retransmission of their programming.

(4) Congress should adopt the industry-proposed must carry provisions for noncommercial television.

(5) Congress should restrict changes in the channel assignment of local broadcast stations except under the following conditions: (a) when channel repositioning is mutually agreed to by the broadcaster and the cable operator; or (b) when technical limitations of the cable system prohibit carriage on a specific channel. Adequate prior notice for any such repositioning must be provided to the station as well as to subscribers. This provision should sunset upon adoption of a retransmission consent regime.

(6) Congress should promote the emergence of alternative multichannel distributors by: (a) prohibiting any programming service in which a multichannel video provider holds a cognizable interest from unreasonably refusing to deal with any competing multichannel provider in areas served by the multichannel provider(s) with which that programming service is vertically integrated; (b) defining "unreasonable refusal to deal" to allow (i) *bona fide* exclusive distribution arrangements that do not significantly impede competition in the local distribution market; and (ii) *bona fide* volume discounts; (c) requiring local

cable system operators, where they market cable network programs to other multichannel video providers within their franchise areas, to do so at reasonable and nondiscriminatory prices and terms; and (d) limiting these specific requirements to five years, by which time the Commission should report to Congress on the necessity of reenacting such requirements.

(7) Congress should provide clear, explicit, and convenient administrative remedies for coercion by any multichannel service provider that requires a programming service to yield as a condition of carriage: (a) any financial interest in that programming service; (b) an exclusive distribution arrangement; (c) a refusal to deal with a competing multichannel provider; or (d) an unreasonably restrictive agreement not to compete with any programming service in which that multichannel service provider holds a financial interest.

(8) If the Congress adopts the measures proposed in Recommendations 6 and 7 above, it should authorize and instruct the Commission to report to the Congress within three years on the effect of such remedies in fostering competition in the video marketplace and whether direct limits on horizontal growth or vertical integration in the cable industry have become necessary.

(9) Congress should encourage leased access by: (a) adding "the promotion of robust programming competition" to the stated purposes of leased access obligations; (b) changing the burden and standard of proof required to establish a violation of the leased access rules; (c) providing the Commission with original jurisdiction to resolve disputes over the provision of leased access channels; and (d) requiring cable operators to provide billing and collection services for channel lessees pursuant to Commission rules.

(10) Congress should strengthen the authority and ability of local franchising authorities to enforce reasonable and effective customer service standards by expressly allowing them to impose penalties for violations thereof at any time in the life of a franchise.

(11) To the extent that any new cable legislation would impose significant administrative burdens on the Commission, Congress should appropriate the necessary funds or provide the Commission with the authority to impose cost-of-regulation fees to fund these activities adequately to fulfill its functions fully and effectively.

Ordering Clause

14. *It is Ordered* That the Secretary shall send copies of this *Report* to the appropriate committees and subcommittees of the United States House of Representatives and the United States Senate.

List of Subjects in 47 CFR Part 76

Cable television.

Federal Communications Commission.

Donna R. Searcy,

Secretary.

[FR Doc. 90-18856 Filed 8-9-90; 8:45 am]

BILLING CODE 6712-01-M

**GENERAL SERVICES
ADMINISTRATION****48 CFR Part 525**

[APD 2800.12A, CHGE 10]

**General Services Administration
Acquisition Regulation; Buy American
Act, Trade Agreements Act, Balance of
Payments Program and Miscellaneous
Revisions to GSA Forms**

AGENCY: Office of Acquisition Policy,
GSA.

ACTION: Final rule.

SUMMARY: The General Services Administration Acquisition Regulation (GSAR) (APD 2800.12A) Chapter 5, is amended by revising section 525.402 to incorporate the substance of Acquisition Circular AC-89-3 into the regulation. The circular authorized GSA contracting officers to deviate from FAR Clause 52.225-9, which could be interpreted in a manner inconsistent with the policy at FAR 25.402 in the application of the Trade Agreements Act to a particular procurement. This document also announces that the GSAR looseleaf is also amended by revising the following forms: 553.370-3503, GSA Form 3503, Representations and Certifications; 553.370-3517, GSA Form 3517, General Clauses (Acquisition of Leasehold Interests in Real Property); 553.370-3518, GSA Form 3518, Representations and Certifications (Acquisition of Leasehold Interests in Real Property); and 553.370-3521, GSA Form 3521, Blanket Purchase Agreement to illustrate the latest 1990 edition of the forms. The forms are not published in this document and do not appear in the Code of Federal Regulations. Copies may be obtained from the Director of the Office of GSA Acquisition Policy (VP), 18th and F Streets NW., Washington, DC 20405.

EFFECTIVE DATE: August 1, 1990.

FOR FURTHER INFORMATION CONTACT:
Ida M. Ustad, Office of GSA Acquisition
Policy, (202) 501-1224.

SUPPLEMENTARY INFORMATION:**A. Public Comments**

Comments were solicited from the public as stated in Acquisition Circular AC-89-3 published in the *Federal Register* at 54 FR 33554 on August 15, 1989; however, no comments were received. The other changes in this rule are not significant revisions and therefore are not required to be published for public comment.

B. Background

The Director, Office of Management and Budget (OMB), by memorandum dated December 15, 1984, exempted certain agency procurement regulations from Executive Order 12291. The exemption applies to this rule.

C. Regulatory Flexibility Act

This rule will not have a significant economic impact on a substantial number of small entities within the meaning of the Regulatory Flexibility Act, 5 U.S.C. 601 et seq., because it authorizes a deviation to a FAR clause that resolves an inconsistency with current FAR policy.

D. Paperwork Reduction Act

This rule does not contain information collection requirements that require the approval of OMB under the Paperwork Reduction Act of 1980 (44 U.S.C. 3501).

List of Subjects in 48 CFR Part 525

Government procurement.

PART 525—[AMENDED]

1. The authority citation for 48 CFR part 525 continues to read as follows:

Authority: 40 U.S.C. 486(c).

2. Section 525.402 is amended by revising paragraphs (b) and (c) to read as follows:

525.402 Policy

(b) In order to remove the inconsistency between paragraphs (b) and (c) of FAR clause 52.225-9 and the policy at FAR 25.402, contracting officers are authorized to deviate from the FAR clause at 52.225-9, Buy American Act—Trade Agreements Act—Balance of Payments Program, in solicitations and contracts that are subject to the Trade Agreements Act by modifying paragraphs (b) and (c) of the FAR clause as follows:

(1) Revise the last sentence of paragraph (b) to read: "Contractors may not supply a foreign end product unless

the foreign end product is a designated country end product or a Caribbean Basin country end product (see FAR 25.401) or unless a waiver is granted under section 302 of the Trade Agreements Act of 1979 (see FAR 25.402(c))."

2. Revise paragraph (c) to read: "Offers will be evaluated in accordance with the policies and procedures of FAR 25.402(a)(1)."

(c) When acquiring eligible products without full and open competition using the authorities in FAR 6.302-3(a)(2)(i) or 6.302-7, a copy of the approved justification must be furnished to the Associate Administrator for Acquisition Policy for subsequent transmittal to the U.S. Trade Representative.

Dated: August 1, 1990.

Richard H. Hopf, III,

Associate Administrator for Acquisition
Policy.

[FR Doc. 90-18706 Filed 8-9-90; 8:45 am]

BILLING CODE 6820-61-M

DEPARTMENT OF COMMERCE

**National Oceanic and Atmospheric
Administration**

50 CFR Part 646

[Docket No. 900798-0198]

**Snapper-Grouper Fishery of the South
Atlantic**

AGENCY: National Marine Fisheries
Service (NMFS), NOAA, Commerce.

ACTION: Notice of closure.

SUMMARY: The Secretary of Commerce (Secretary) closes the fishery for wreckfish in the exclusive economic zone (EEZ) off the South Atlantic states. The Secretary has determined that the quota for wreckfish will be reached on August 8, 1990. This closure is necessary to protect the wreckfish resource.

EFFECTIVE DATE: The closure is effective at 11:59 p.m., August 8, 1990.

FOR FURTHER INFORMATION CONTACT:
Robert A. Sadler, 813-893-3722.

SUPPLEMENTARY INFORMATION: Snapper-grouper species are managed under the Fishery Management Plan for the Snapper-Grouper Fishery of the South Atlantic Region (FMP), prepared by the South Atlantic Fishery Management Council (Council), and its implementing regulations at 50 CFR part 646, under the authority of the Magnuson Fishery Conservation and Management Act (Magnuson Act). By emergency rule effective on August 3, 1990, wreckfish were added to the snapper-grouper

management unit and conservation measures including a quota and closure provisions were implemented to conserve the resource. A wreckfish quota of 2 million pounds (907,194 kilograms) was established for the fishing year that started April 16, 1990.

Under § 646.25(b)(2), the Secretary is required to close the wreckfish fishery when its quota is reached, or is projected to be reached, by publishing a notice in the **Federal Register**. The Secretary has determined that the wreckfish quota of 2 million pounds will be reached on August 8, 1990. Hence, the wreckfish fishery is closed effective at 11:59 p.m. on August 8, 1990.

During the closure, wreckfish may not be harvested or possessed in or from the EEZ and the purchase, barter, trade, offer for sale, and sale of wreckfish taken from the EEZ is prohibited. This prohibition does not apply to trade in wreckfish that were harvested, landed, and bartered, traded, or sold prior to the

effective date of this notice in the **Federal Register** and that were held in cold storage by a dealer or processor.

This closure of the wreckfish fishery will remain in effect through November 1, 1990, the termination date of the emergency rule that established the quota and the closure provisions, unless the period of effectiveness of the emergency rule is extended. Upon agreement of the Secretary and the Council, the emergency rule may be extended for an additional period of not more than 90 days.

The Council will submit Amendment 3 to the FMP for consideration by the Secretary. Amendment 3 will add the wreckfish conservation and management measures of the emergency rule, including the quota and closure provisions, and additional measures, to the FMP. Among those additional measures is a proposal for a spawning-season closure during the period January 15 through April 15. If the emergency

rule is extended for an additional period of 90 days, as is likely, and if the quota and closure provisions or spawning-season closure of Amendment 3 is implemented before the conclusion of that additional period, the wreckfish fishery would remain closed through April 15, 1991.

Other Matters

This action is required by 50 CFR 646.25(b)(2) and complies with E.O. 12291.

Authority: 16 U.S.C. 1801 *et seq.*

List of Subjects in 50 CFR Part 646

Fisheries, Fishing, Reporting and recordkeeping requirements.

Dated: August 7, 1990.

Richard H. Schaefer,

Director of Office of Fisheries, Conservation and Management, National Marine Fisheries Service.

[FR Doc. 90-18847 Filed 8-7-90; 4:08 pm]

BILLING CODE 3510-22-M

Proposed Rules

Federal Register

Vol. 55, No. 155

Friday, August 10, 1990

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF AGRICULTURE

Agricultural Marketing Service

7 CFR Part 981

[Docket No. FV-90-185PR]

Almonds Grown in California; Proposed Salable, Reserve, and Export Percentages for the 1990-91 Crop Year

AGENCY: Agricultural Marketing Service, USDA.

ACTION: Proposed rule.

SUMMARY: This action gives notice of a proposal to establish salable, reserve, and export percentages of 65 percent, 35 percent, and 0 percent, respectively, for marketable California almonds received by handlers during the 1990-91 crop year, which began on July 1, 1990. This action is taken under the marketing order for almonds grown in California and is intended to avoid unreasonable fluctuations in shipments and prices in view of a projected record-large California almond supply. This action is based on recommendations of the Almond Board of California (Board), which is responsible for local administration of the order, and other available information.

DATES: Comments must be received by August 27, 1990.

ADDRESSES: Interested persons are invited to submit written comments concerning this proposal. Comments must be sent in triplicate to the Docket Clerk, Marketing Order Administration Branch, F&V, AMS, USDA, room 2525-S, P.O. Box 96456, Washington, DC 20090-6456.

Comments should reference the docket number and the date and page number of this issue of the *Federal Register* and will be available for public inspection in the Office of the Docket Clerk during regular business hours.

FOR FURTHER INFORMATION CONTACT: Allen Belden, Marketing Order Administration Branch, F&V, AMS,

USDA, room 2525-S, P.O. Box 96456, Washington, DC 20090-6456; telephone: (202) 475-3923.

SUPPLEMENTARY INFORMATION: This proposed rule is issued under marketing agreement and Order No. 981 (7 CFR part 981), both as amended, hereinafter referred to as the order, regulating the handling of almonds grown in California. The order is effective under the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601-674), hereinafter referred to as the Act.

This rule has been reviewed by the Department in accordance with Departmental Regulation 1512-1 and the criteria contained in Executive Order 12291 and has been determined to be a "non-major" rule.

Pursuant to requirements set forth in the Regulatory Flexibility Act (RFA), the Administrator of the Agricultural Marketing Service (AMS) has considered the economic impact of this action on small entities.

The purpose of the RFA is to fit regulatory actions to the scale of business subject to such actions in order that small businesses will not be unduly or disproportionately burdened. Marketing orders issued pursuant to the Act, and rules issued thereunder, are unique in that they are brought about through group action of essentially small entities acting on their own behalf. Thus, both statutes have small entity orientation and compatibility.

There are approximately 95 handlers of almonds who are subject to regulation under the marketing order and approximately 7,000 producers in the regulated area. Small agricultural producers have been defined by the Small Business Administration (13 CFR 121.2) as those having annual receipts of less than \$500,000, and small agricultural service firms are defined as those whose annual receipts are less than \$3,500,000. The majority of handlers and producers of California almonds may be classified as small entities.

This proposal would require handlers of California almonds to withhold, as a reserve, from normal domestic and export markets, 35 percent of merchantable almonds received from growers during the 1990-91 crop year. The remaining 65 percent (the salable percentage) of the crop could be sold by handlers in any market. Total 1990 crop production is expected to be 655 million kernelweight pounds. If realized, this

would be the second largest domestic crop on record and only 0.8 percent smaller than the record large 1987 crop of 660 million kernelweight pounds. Total 1990-91 crop year supplies (1990 crop marketable production plus marketable production carried in from the 1989-90 crop year) are projected at a record large 844 million kernelweight pounds—6.5 percent larger than the previous record 1988-89 supply of 792.4 million kernelweight pounds. Domestic and export trade demand for 1990-91 is estimated at 565 million kernelweight pounds.

Reserve almonds could be released to the salable category at a later date if it is found that the salable percentage is insufficient to satisfy 1990-91 trade demand, including desirable carryover requirements for use during the 1991-92 crop year (if it appears that the 1991 crop will be insufficient to meet 1991-92 trade demand needs). Otherwise, reserve almonds would be diverted to secondary outlets that are not competitive with existing normal markets. These outlets would include almond oil, almond butter, animal feed, and other secondary outlets.

While this rule may restrict the amount of almonds which handlers may sell in normal domestic and export markets, the proposed salable and reserve percentages are needed to lessen the impact of the oversupply situation facing the industry and to promote stronger marketing conditions, thus avoiding unreasonable fluctuations in prices and supplies and improving grower returns. Further, this proposed action could help provide market stability during the 1991-92 crop year by reserving almonds for shipment during the 1991-92 season in the event that 1991 production is below trade demand needs.

This proposal is based on two recommendations of the Board and upon other available information.

Authority to establish salable, reserve, and export percentages is provided in § 981.47 of the order. Pursuant to § 981.47 and 981.49 of the order, the Board based its recommendation for salable, reserve, and export percentages of 65 percent, 35 percent, and 0 percent, respectively, on estimates of marketable supply and combined domestic and export trade demand for the 1990-91 crop year. The Board's 1990 marketable production

estimate of 629 million kernelweight pounds is based on a 1990 crop estimate issued by the National Agricultural Statistics Service of 655 million kernelweight pounds, minus an estimated weight loss of 26 million kernelweight pounds resulting from the removal of inedible kernels by handlers and losses during manufacturing.

Trade demand is estimated at 565 million kernelweight pounds—190 million pounds for domestic needs and 375 million pounds for export needs. An inventory adjustment is made to account for supplies of salable almonds carried in from the 1989–90 crop year on July 1, 1990, and for supplies of salable almonds deemed desirable to be carried out on June 30, 1991, for early season shipment during the 1991–92 crop year until the 1991 crop is available for market. After adjusting for inventory, the trade demand is calculated at 409 million kernelweight pounds. This is the quantity of almonds from the estimated 1990 marketable production deemed necessary to meet trade demand needs. The proposed salable percentage of 65 percent would meet those needs.

The remaining 35 percent (220 million kernelweight pounds) of the 1990 crop marketable production would be withheld by handlers to meet their reserve obligations. All or part of these almonds could be released to the salable category if it is found that the supply made available by the salable percentage is insufficient to satisfy 1990–91 trade demand needs, including desirable carryover requirements for use during the 1991–92 crop year. The Board is required to make any recommendations to the Secretary to increase the salable percentage prior to May 15, 1991. Alternatively, all or a portion of reserve almonds would be sold by the Board, or by handlers under agreement with the Board, to governmental agencies or charitable institutions or for diversion into almond oil, almond butter, animal feed, or other outlets which the Board finds are noncompetitive with existing normal markets for almonds.

The order permits the Board to include normal export requirements with domestic requirements in its estimate of trade demand when recommending the establishment of salable, reserve, and export percentages for any crop year. For the 1990–91 crop year, estimated exports are included in the trade demand. Thus, an export percentage of 0 percent is proposed. Therefore, reserve almonds would not be eligible for export to normal export outlets. However, handlers may ship their salable almonds in export markets.

A tabulation of the estimates and calculations used by the Board in arriving at its recommendations follows:

Marketing Policy Estimates—1990 Crop

(Kernelweight Basis)		
	Million pounds	Percent
Estimated Production.....		
1. 1990 Production.....	655.0	
2. Loss and Exempt—		
4.0%.....	26.0	
3. Marketable Production.....	629.0	
Estimated Trade Demand.....		
4. Domestic.....	190.0	
5. Export.....	375.0	
6. Total.....	565.0	
Inventory Adjustment.....		
7. Carryin 7/1/90.....	215.0	
8. Desirable Carryover 6/30/91.....	59.0	
9. Adjustment (Item 8 minus item 7).....	(156.0)	
Salable/Reserve.....		
10. Adjusted Trade Demand (Item 6 plus item 9).....	409.0	
11. Reserve (Item 3 minus item 10).....	220.0	
12. Salable % (Item 10 divided by item 3 × 100).....		65
13. Reserve % (100% minus item 12).....		35

This proposed action would help avoid unreasonable fluctuations in shipments and prices as the industry faces what is projected to be the second largest crop and largest total supply on record. The projected 1990–91 crop year supply of 844 million marketable kernelweight pounds would be 28 percent larger than the 657.8 million kernelweight pound average annual supply for the last five years (1985–86 through 1989–90). Although official estimates of world almond production were not available when this recommendation was made by the Board, it is likely that world production will also be high, barring a major crop failure in any of the other major producing countries.

In making its recommendations, the Board considered information and analyses from a variety of sources including handlers, marketers, buyers, and producers of almonds presented at public meetings. Input at the meetings varied from open discussions to the presentation of an economic study designed to assist the Board in arriving at its recommendation for 1990–91 crop year salable and reserve percentages.

The "Guidelines for Fruit, Vegetable, and Specialty Crop Marketing Orders" (Guidelines) issued by AMS in 1982 specify that 110 percent of recent years' sales be made available to primary

markets each season. This proposed action would provide an estimated 624 million kernel weight pounds of California almonds for unrestricted sales (1990 crop salable production plus carryin from the 1989 crop) to meet increasing domestic and world almond consumption demand. This amount exceeds the current record for delivered sales of California almonds, set in 1988–89, by 19 percent. Thus, the Guidelines requirement would be met.

Based on the above, the Administrator of the AMS has determined that the issuance of this proposed rule would not have a significant economic effect on a substantial number of small entities.

Interested persons are invited to submit their views and comments on this proposal. A 15-day comment period is considered appropriate because new crop almonds are expected to be harvested and delivered by growers to handlers as early as August. Accordingly, handlers, buyers, and producers should know as soon as possible the extent to which volume regulation may be put into effect this crop year.

List of Subjects in 7 CFR Part 981

Almonds, Marketing agreements, Nuts, Reporting and recordkeeping requirements.

For the reasons set forth in the preamble, 7 CFR part 981 is proposed to be amended as follows:

PART 981—ALMONDS GROWN IN CALIFORNIA

1. The authority citation for 7 CFR part 981 continues to read as follows:

Authority: Secs. 1–19, 40 Stat. 31, as amended; 7 U.S.C. 601–674.

Subpart—Salable, Reserve, and Export Percentages

2. Section 981.237 is added to read as follows:

§ 981.237 Salable, reserve and export percentages for almonds during the crop year beginning on July 1, 1990.

The salable, reserve, and export percentages during the crop year beginning on July 1, 1990, shall be 65 percent, 35 percent, and 0 percent, respectively.

Dated: August 6, 1990.

Robert C. Keeney,

Deputy Director, Fruit and Vegetable Division.

[FR Doc. 90–18772 Filed 8–9–90; 8:45 am]

BILLING CODE 3410–02–M

NUCLEAR REGULATORY COMMISSION**10 CFR Ch. 1****Issuance of Quarterly Report on the Regulatory Agenda**

AGENCY: Nuclear Regulatory Commission.

ACTION: Issuance of Regulatory Agenda.

SUMMARY: The Nuclear Regulatory Commission (NRC) has issued the NRC Regulatory Agenda for the second quarter, April through June, of 1990. The agenda is issued to provide the public with information about NRC's rulemaking activities. The Regulatory Agenda is a quarterly compilation of all rules on which the NRC has recently completed action or has proposed, or is considering action and of all petitions for rulemaking that the NRC has received that are pending disposition.

ADDRESSES: A copy of this report, designated NRC Regulatory Agenda (NUREG-0936) Vol. 9, No. 2, is available for inspection, and copying for a fee, at the Nuclear Regulatory Commission's Public Document Room, 2120 L Street NW, (Lower Level), Washington, DC.

In addition, the U.S. Government Printing Office (GPO) sells the NRC Regulatory Agenda. To purchase it, a customer may call (202) 275-2060 or (202) 275-2171 or write to the Superintendent of Documents, U.S. Government Printing Office, Post Office Box 37082, Washington, DC 20013-7082.

FOR FURTHER INFORMATION CONTACT: Michael T. Lesar, Chief, Rules Review Section, Regulatory Publications Branch, Division of Freedom of Information and Publications Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: (301) 492-7758, toll-free number (800) 368-5642.

Dated at Bethesda, Maryland, this 27th day of July 1990.

For the Nuclear Regulatory Commission.

Donnie H. Grimsley,

Director, Division of Freedom of Information and Publications Services, Office of Administration.

[FR Doc. 90-18740 Filed 8-9-90; 8:45 am]

BILLING CODE 7590-01-M

10 CFR Part 60

[Docket No. PRM-60-3]

Department of Energy; Correction of Receipt of Petition for Rulemaking

AGENCY: Nuclear Regulatory Commission.

ACTION: Petition for rulemaking; Notice of receipt, Correction.

SUMMARY: This document corrects a notice of receipt of petition for rulemaking filed by the U.S. Department of Energy which was published in the *Federal Register* on July 13, 1990 (55 FR 28771). This action is necessary to correct two typographical errors.

FOR FURTHER INFORMATION CONTACT: Michael T. Lesar, Chief, Rules Review Section, Regulatory Publications Branch, Division of Freedom of Information and Publications Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: 301-492-7758.

In the *Federal Register* of July 13, 1990, in the center column of page 28773, make the following corrections:

1. In the eighth line of the first complete paragraph of the document "the" should be changed to read "that."

2. In the tenth line of the second complete paragraph remove the word "that."

Dated at Bethesda, Maryland, this 3rd day of August 1990.

For the Nuclear Regulatory Commission.

David L. Meyer,

Chief, Regulatory Publications Branch, Division of Freedom of Information and Publications Services, Office of Administration.

[FR Doc. 90-18741 Filed 8-9-90; 8:45 am]

BILLING CODE 7590-01-M

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 39**

[Docket No. 89-ASW-41]

Airworthiness Directives; Schweizer Aircraft (Hughes Helicopter, Inc.) Model 269 Series Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This notice proposes to: (1) Amend an airworthiness directive (AD) applicable to Schweizer Aircraft Corporation (Hughes Helicopters, Inc.) Model 269 series helicopters, which currently requires an inspection and rework of the abrasion strip of tail rotor blades with certain serial numbers; and (2) supersede an AD for the same model helicopter, which currently requires an inspection of Hughes-manufactured tail rotor blades with certain serial numbers. The amendment would require daily checks and rework of certain tail rotor

blades, on all Schweizer Aircraft Corporation (Hughes Helicopters, Inc.) Model 269 series helicopters, regardless of blade serial numbers or tail rotor blade manufacturer. These actions are needed to prevent loss of abrasion strips on tail rotor blades which, in turn, could result in the loss of control of the helicopter.

DATES: Comments must be received on or before October 12, 1990.

ADDRESSES: Comments on the proposal may be mailed in duplicate to: Regional Rules Docket, Office of the Assistant Chief Counsel, 4400 Blue Mound Road, Fort Worth, Texas 76193-0007, Docket Number 89-ASW-41, or delivered in duplicate to Room 158, Building 3B, of the Regional Rules Docket, 4400 Blue Mound Road, Fort Worth, Texas. Comments must be marked: Docket No. 89-ASW-41.

Comments may be inspected at the above location in room 158, Building 3B, between 8 a.m. and 4:30 p.m., except Federal holidays.

The applicable service information may be obtained from: Schweizer Aircraft Corporation, P.O. Box 147, Elmira, New York 14902, or may be examined in the Regional Rules Docket.

FOR FURTHER INFORMATION CONTACT: Mr. Anthony Socias, Aerospace Engineer, Airframe Branch, New York Aircraft Certification Office, ANE-172, FAA, New England Region, 181 South Franklin Avenue, Valley Stream, New York 11581. Telephone (516) 791-6680.

SUPPLEMENTARY INFORMATION:

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications should identify the regulatory docket number and be submitted in duplicate to the address specified above. All communications received on or before the closing date for comments will be considered by the FAA before any final action is taken on the proposed rule. The proposal contained in this notice may be changed in light of the comments received.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket, Office of Assistant Chief Counsel, 4400 Blue Mound Road, Building 3B, room 158, Fort Worth, Texas, for examination by interested persons. A report summarizing each FAA-public contact, concerned with the

substance of this proposal, will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 89-ASW-41." The postcard will be date/time stamped and returned to the commenter.

On March 5, 1990, the FAA issued Amendment 39-6540 (55 FR 10228, March 20, 1990), AD 89-20-03, that requires a special inspection to detect debonding of the abrasion strip of tail rotor blades, part number (P/N) 269-A6035-21 and -23, with certain serial numbers manufactured by Schweizer. AD 89-20-03 also requires the immediate installation of rivets to reinforce the attachment of the tail rotor blade abrasion strip to the body of the tail rotor blade to preclude loss of the strip. Earlier, the FAA has issued Amendment 39-5730 (52 FR 4155, October 29, 1987), AD 87-22-07, that required checks and inspections of tail rotor blades with certain serial numbers manufactured by only Hughes Helicopters, Inc.

Since the issuance of AD 89-20-03, the FAA has learned the Model 269 series helicopter tail rotor blades manufactured before September 15, 1989, whether manufactured by Hughes Helicopters Inc. or Schweizer Aircraft Corporation, are subject to possible separation of the abrasion strip from the tail rotor blade skin. Schweizer has issued revised Schweizer Service Information Notice 183.3, dated September 15, 1989, which provides inspection and repair procedures for the installation of rivets to preclude separation of the tail rotor blade abrasion strips. Tail rotor blades bonded on or after September 15, 1989, were delivered with rivets installed and are exempt from the rework and inspection requirements.

Since this condition is likely to exist or develop on other tail rotor blades of helicopters of this same type design, the proposed amendment would further amend AD 89-22-03 and supersede AD 87-22-07 to now require the installation of rivets to reinforce the attachment of the tail rotor blade abrasion strip to the body of all other tail rotor blades, regardless of tail rotor blade manufacturer and to continue the mandatory daily blade checks or inspections of all blades, except those blades manufactured on or after September 15, 1989.

The proposed amendment would pertain to all tail rotor blades, P/N 269A60035 series, and all other tail rotor

blades manufactured before September 15, 1989. Proposed new paragraph (a)(1) would be equivalent to the existing paragraph (a)(2) for rivet installation in certain Schweizer blades. A new paragraph (a)(2) would apply to all other blades, including those affected by AD 87-22-09, and would require installation of rivets within 100 hours' time in service after the effective date of the AD, as amended, if not already installed. Revised paragraph (b) would apply to all tail rotor blades manufactured prior to September 15, 1989, and would require daily visual checks of the blades whether or not rivets are installed. At the same time, the AD applicability statement would be changed by removing references to specific part numbers of blades. Finally, a new paragraph (h) would exempt blades bonded on or after September 15, 1989.

The regulations proposed herein would not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this proposal would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

The FAA has determined that this proposed regulation would involve approximately 1,550 U.S. registered helicopters. It is estimated that it would take 5.5 manhours at \$40 manhour for the rivet installation for each helicopter. In addition, it is estimated that it would cost \$1,200 per helicopter per year to accomplish the required daily checks. Based on this, it is estimated that the total cost impact on the U.S. fleet would be \$2,201,000. Therefore, I certify that this action: (1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) if promulgated, will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the draft evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation Safety, Safety.

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend Part 39 of the Federal Aviation Regulation (14 CFR 38.13) as follows:

PART 39—[AMENDED]

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 1354(a), 1421 and 1423, 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12 1983); and 14 CFR 11.89.

§ 39.13 [Amended]

2. Section 39.13 is amended by amending Amendment 39-6540 (55 FR 10228, March 20, 1990), AD 89-20-03, by revising the applicability statement and paragraphs (a) and (b), and by adding a new paragraph (h) to read as follows:

Schweizer Aircraft Corporation (Hughes Helicopters, Inc.)

Applies to all Model 269 series helicopters certificated in any category, equipped with tail rotor blades manufactured before September 15, 1989. (Docket No. 89-ASW-41)

Compliance is required as indicated, unless already accomplished.

To prevent possible loss of tail rotor control, accomplish the following:

(a) Install rivets in the tail rotor blades as follows:

(1) Prior to further flight after the effective date of this AD, modify the affected tail rotor blades with the following serial numbers (S/N) in accordance with the procedures detailed in Appendix 1 of this AD:

Blades S/N's affected

R0056	S544	S608
R0086	S546	S611-S620
R1059	S547	S623-S626
R1086	S549	S631-S633
R1560	S550	S637
R1922	S553	S638
R3296	S556-S563	S640-S644
R3314	S565	S646
R3330	S566	S648-S650
R3349	S568-S571	S653
S21	S573	S654
S431	S576-S582	S657
S513	S584	S660-S662
S515	S586	S664-S666
S518	S588	S668
S521	S589-S594	S670-S672
S524	S596	S675-S677
S534	S598-S603	S679-S682
S538	S605	S684-S688
S539	S607	S691-S694

(2) Within the next 100 hours' time in service after the effective date of this AD, modify all tail rotor blades, whether manufactured by Schweizer or Hughes, except those listed in paragraph (a)(1) in accordance with procedures described in Appendix I of this AD.

(b) Before the first flight of each day, after the effective date of this AD, visually check the abrasion strip of each

blade for any evidence of cracking or chipping along the entire abrasion strip/airfoil bond line and at the blade tip.

(h) Tail rotor blades manufactured by Schweizer with a bond date on or after September 15, 1989, shown on the identification place located on the inboard end of the blade, are exempt from the requirements of this AD.

Issued in Fort Worth, Texas, on July 30, 1990.

Henry A. Armstrong,

Acting Manager, Rotorcraft Directorate,
Aircraft Certification Service.

[FR Doc. 90-18801 Filed 8-9-90; 8:45 am]

BILLING CODE 4910-13-M

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

18 CFR part 141

[Docket No. RM90-9-000]

Modification of Regulations on Form No. EIA-714, Annual Electric Power System Report; Notice of Proposed Rulemaking

August 3, 1990.

AGENCY: Federal Energy Regulatory
Commission, DOE.

ACTION: Notice of Proposed Rulemaking.

SUMMARY: The Federal Energy Regulatory Commission (Commission) proposes to amend its regulations on Form No. EIA-714, Annual Electric Power System Report (18 CFR 141.51). The amendments involve retitling of the Form and changing who must submit the Form. The title is proposed to be changed to "Annual Control Area and Electric System Report." The amendments also propose to require submission of data by control areas and electric utilities with a peak load greater than 200 MW. The purpose of the proposed changes is to provide consistent reporting of electric utility industry operational data to better support current regulatory responsibilities of the Commission.

DATES: Written comments must be received by the Commission by September 10, 1990.

ADDRESSES: Federal Energy Regulatory Commission, 825 North Capitol Street, NE., Washington, DC 20426.

FOR FURTHER INFORMATION CONTACT: Betty N. Toepfer, Office of the General Counsel, Federal Energy Regulatory Commission, 825 North Capitol Street NE., Washington, DC 20426, (202) 208-0464.

Notice of Proposed Rulemaking

I. Introduction

The Federal Energy Regulatory Commission (Commission) is proposing to amend its regulations on Form No. EIA-714, Annual Electric Power System Report¹. The proposed amendments would: (1) Require that individual electric utilities or groups of electric utilities, called "control areas," report the appropriate schedules; (2) require that individual electric utilities or groups of electric utilities which constitute a planning area and that have a peak load greater than 200 megawatts report the appropriate schedules; and (3) change the title of the report to reflect these changes.

Since control areas are the basic operating arrangement of the electric utility industry, this proposed rule will provide more comprehensive, more accurate, and more consistent statistics on electric power industry operations. The current wording of the Commission's regulations does not require reporting by control area, only by electric utilities.

The purpose of the proposed changes is to provide consistent reporting of electric utility industry operational data to better support current regulatory responsibilities of the Commission. The Energy Information Administration (EIA) shares in sponsoring this form.²

II. Reporting Burden

The annual public reporting burden for collection of information, as revised herein, is estimated to be 68 hours per response for the Form No. EIA-714.³ This estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding these burden estimates or any other aspect of this collection of information, including suggestions for reducing this burden, to the Federal Energy Regulatory Commission, 825 North Capitol Street NE., Washington, DC 20426 [Attention: Michael Miller, Office of Management Systems and Analysis, (202) 208-1415]; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503

¹ 18 CFR 141.51 (1989).

² The EIA is a branch of the Department of Energy (DOE).

³ On July 9, 1990, EIA issued a Federal Register notice soliciting comments on proposed revisions and extension of Form EIA-714. The notice states that the comments submitted will be summarized and included in EIA's request for Office of Management and Budget approval of the form.

[Attention: Desk Officer for the Federal Energy Regulatory Commission].

III. Background and Discussion

The current regulations in § 141.51 are somewhat cumbersome and unwieldy for the Commission because the basic operating arrangement of the industry, a control area, is not necessarily equivalent to the current reporting unit, which is a "system" surpassing certain threshold criteria. This lack of consistency or equivalence between the control area, as defined by the industry, and a "system," as defined in the Commission's current regulations, makes it difficult for utilities to report some of the necessary data and for the Commission and EIA to construct a comprehensive picture of electric industry operations.

The Commission proposes the applicable operational information on the Form No. EIA-714 be reported by control area. However, load (peak load and energy projections and hourly load data) and transmission data (transmission system maps and line data) are more appropriately reported by individual electric utilities or groups of electric utilities which constitute a planning area, *i.e.*, assume load responsibility.⁴ Since the planning area may or may not be the same as the control area, the Commission proposes that planning areas with peak loads greater than 200 MW be required to submit the appropriate schedules on the Form No. EIA-714.

The Commission also proposes to change the title of the form to "Annual Electric Control and Planning Area Report," in order to make the title descriptive of the revised forms.

IV. Proposed Changes

The Commission proposes to amend the current regulations as follows:

(a) *Proposed inclusion of "Control Areas" as entities required to file a Form No. EIA-714*

The current regulations require that an EIA-714 report be filed by any "electric utility," as defined under section 3(4) of the Public Utility Regulatory Policies Act, 16 U.S.C. § 2602 (1988).⁵ The proposed regulations would require that a Form No. EIA-714 filing be made by any electric utility or group of electric utilities that operate as a "control area." For purposes of determining who must file a Form No. EIA-714, the term "electric utility"

⁴ Assuming load responsibility means planning resources to meet projected electrical demand.

⁵ See also 18 CFR 141.51(a) (1989).

would continue to be defined as it is now (*see* beginning of this paragraph) and a "control area" would mean an integrated electric system capable of regulating its generation in order to maintain its interchange schedule with other systems and capable of contributing to the frequency regulation of the regional interconnected grid.⁶

(b) *Proposed inclusion of "Planning Areas" as entities required to file a Form No. EIA-714 when their peak load is greater than 200 megawatts*

The proposed regulations would require that a Form No. EIA-714 report must be filed by any electric utility or group of electric utilities that constitute a planning area and that have a peak load greater than 200 megawatts (MW) based on net energy for load for the reporting year.⁷ For purposes of determining who must file a Form No. EIA-714, the term "electric utility" would continue to be defined as it is now and the term "planning area" would mean a combination of generation, transmission and distribution components comprising an electric utility, or group of utilities, which assumes load responsibility.

(c) *Proposed change in title of the regulation and title of Form No. EIA-714*

Form No. EIA-714 is currently titled "Annual Electric Power System Report." The proposed regulation would retitle both the form and the authorizing regulation as "Annual Electric Control and Planning Area Report." This change would be descriptive of the contents of a Form No. EIA-714 under the proposed revision, and, in particular, would provide additional awareness of the new requirement made of control and planning areas.

V. Regulatory Flexibility Act Certification

The Regulatory Flexibility Act (RFA),⁸ generally requires a description and analysis of proposed rules that will have a "significant economic impact on a substantial number of small entities." The Commission is not required to make

such an analysis if a rule would not have such an effect. The Commission does not believe that this rule will have such an impact on a substantial number of small entities. Most electric utilities do not fall within the RFA's definition of small entity.⁹ Therefore, the Commission certifies that this rule will not have a significant economic impact on a substantial number of small entities.

VI. Environmental Statement

The Commission concludes that issuance of this rule would not represent a major federal action having significant adverse effect on the human environment under the Commission regulations implementing the National Environmental Policy Act.¹⁰ This rule is procedural in nature and therefore falls within the categorical exemptions provided in the Commission's regulations. Consequently, neither an environmental impact statement nor an environmental assessment are required.¹¹

VII. Information Collection Statement

The Office of Management and Budget's (OMB) regulations¹² and the Paperwork Reduction Act,¹³ require that OMB approve certain information and record keeping requirements imposed by agency rules. This regulation, to be entitled Form No. EIA-714, Annual Electric Control and Planning Area Report, is proposed as a replacement for current regulation 18 CFR 141.51, Annual Electric Power System Report, and is being submitted to OMB for its review. The proposed regulation will provide more comprehensive, more accurate, and more consistent statistics on electric power industry operations to assist the Commission in fulfilling its regulatory responsibilities under the Federal Power Act.¹⁴ The proposed regulation will apply to individual electric utilities and groups of electric utilities operating either as control areas or as planning areas. It would involve the aggregation by some utilities, so-called "control areas," of data on electrical systems that must currently be filed in a disaggregated format. The Commission

estimates that there will be approximately 317 respondents, with an estimated annual average response burden of 68 hours. The total estimated annual average response burden will be 21,556 hours.

VIII. Comment Procedures

The Commission invites all interested persons to submit written comments on this Notice of Proposed Rulemaking to the Office of the Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street NE., Washington, DC 20426. Comments should refer to Docket No. RM90-9-000 on the outside of the envelope and on all documents submitted to the Commission. Fourteen copies should be submitted with the original. Comments must be filed on or before September 10, 1990. Copies of the written comments may be obtained from the Commission's Division of Public Information, room 3308, 941 North Capitol Street NE., Washington, DC 20426.

Comments are available for public inspection at the Commission's Division of Public Information, room 3308, 941 North Capitol Street NE., Washington, DC 20426, during regular business hours.

List of Subjects in 18 CFR Part 141

Electric utilities, Reporting and recordkeeping requirements.

In consideration of the foregoing, the Commission proposes to amend part 141 in chapter I, title 18 of the Code of Federal Regulations, as set forth below.

By direction of the Commission.

Lois D. Cashell,
Secretary.

PART 141—STATEMENTS AND REPORTS (SCHEDULES)

1. The authority citation for part 141 is revised to read as follows:

Authority: Department of Energy Organization Act, 42 U.S.C. 7102-7352; E.O. 12,009, 3 CFR 1978 Comp., p. 142; Federal Power Act, 16 U.S.C. 791a-828c; Public Utility Regulatory Policies Act, 16 U.S.C. 2601-2645.

2. Section 141.51 is revised to read as follows:

§ 141.51 Form No. EIA-714, Annual Electric Control and Planning Area Report.

(a) *Who must file.* (1) Any electric utility, as defined under section 3(4) of the Public Utility Regulatory Policies Act, 16 U.S.C. 2602 (1988), operating a control area and any group of electric utilities, which by way of contractual arrangements operate as a single control area, must complete and file the applicable schedules in Form No. EIA-714 with the Energy Information Agency.

⁶ An electric system is defined as the physically connected generation, transmission, distribution, and other facilities operated as an integral unit under one control, management, or operating supervision. The definition of control area is consistent with the NERC Operating Manual (North American Electric Reliability Council) of April 1, 1990.

⁷ The current regulations provide that the electric utility must report "for every system that: (2) [o]wns and/or operates operable generating capacity of more than 25 megawatts (MW); and (3) [h]as net system and firm sales for resale in excess of 100,000 megawatt hours (MWh) for the reporting year."

⁸ 5 U.S.C. 601-612 (1988).

⁹ 5 U.S.C. 601(3), citing to section 3 of the Small Business Act, 15 U.S.C. 632 (1988). Section 3 of the Small Business Act defines a "small-business concern" as a business which is independently owned and operated and which is not dominant in its field of operation.

¹⁰ 52 Fed. Reg. 47,897 (Dec. 17, 1987), III FERC Stats. & Regs. ¶ 30,783 (Dec. 10, 1987) (codified at 18 CFR part 380).

¹¹ See 18 CFR 380.4(a)(1) (1989).

¹² 5 CFR 1320.12 (1984).

¹³ 44 U.S.C. 3501-3520 (1988).

¹⁴ 16 U.S.C. 824 *et seq.* (1988).

(2) Any electric utility or group of electric utilities which constitute a planning area and that have a peak load greater than 200 megawatts (MW) based on net energy for load for the reporting year must complete applicable schedules in Form No. EIA-714.

(b) *When to file.* Form No. EIA-714 must be filed on or before each May 1 for the preceding calendar year, beginning with data covering calendar year 1990, which must be filed on or before May 1 1991.

(c) *What to file.* An original and three conformed copies of the Form No. EIA-714, "Annual Electric Control and Planning Area Report," must be filed with the Energy Information Administration, in accordance with the instructions in that form and in this section.

[FR Doc. 90-18771 Filed 8-9-90; 8:45 am]

BILLING CODE 6717-01-M

DEPARTMENT OF THE INTERIOR

Office of Surface Mining Reclamation and Enforcement

30 CFR Part 935

Ohio Permanent Regulatory Program; Evaluation of Revegetation Success

AGENCY: Office of Surface Mining Reclamation and Enforcement (OSM), Interior.

ACTION: Proposed rule; reopening of public comment period.

SUMMARY: OSM is reopening the public comment period on Revised Program Amendment No. 25 to the Ohio permanent regulatory program (hereinafter referred to as the Ohio program) under the Surface Mining Control and Reclamation Act of 1977 (SMCRA). Ohio has proposed further revisions to one rule which are intended to respond to OSM comments about the proposed amendment and to make the rule as effective as the corresponding Federal regulations concerning the evaluation of revegetation success.

This notice sets forth the times and locations that the Ohio program and proposed amendments to that program will be available for public inspection, the comment period during which interested persons may submit written comments on the proposed amendments, and the procedures that will be followed regarding the public hearing, if one is requested.

DATES: Written comments must be received on or before 4 p.m. on September 10, 1990. If requested, a public hearing on the proposed

amendments will be held at 1 p.m. on September 4, 1990. Requests to present oral testimony at the hearing must be received on or before 4 p.m. on August 27, 1990.

ADDRESSES: Written comments and requests to testify at the hearing should be mailed or hand-delivered to Ms. Nina Rose Hatfield, Director, Columbus Field Office, at the address listed below. Copies of the Ohio program, the proposed amendments, and all written comments received in response to this notice will be available for public review at the addresses listed below during normal business hours, Monday through Friday, excluding holidays. Each requester may receive, free of charge, one copy of the proposed amendments by contacting OSM's Columbus Field Office.

Office of Surface Mining Reclamation and Enforcement, Columbus Field Office, 2242 South Hamilton Road, room 202, Columbus, Ohio 43232, Telephone: (614) 866-0578.
Ohio Department of Natural Resources, Division of Reclamation, Fountain Square, Building B-3, Columbus, Ohio 43224, Telephone: (614) 265-6675.

FOR FURTHER INFORMATION CONTACT: Ms. Nina Rose Hatfield, Director, Columbus Field Office, (614) 866-0578.

SUPPLEMENTARY INFORMATION:

I. Background

On August 16, 1982, the Secretary of the Interior conditionally approved the Ohio program. Information on the general background of the Ohio program submission, including the Secretary's findings, the disposition of comments, and a detailed explanation of the conditions of approval of the Ohio program, can be found in the August 10, 1982 Federal Register (47 FR 34688). Subsequent actions concerning the conditions of approval and program amendments are identified at 30 CFR 935.11, 935.12, 935.15, and 935.16.

II. Discussion of the Proposed Amendments

By letter dated November 3, 1987 (Administrative Record No. OH-987), the Ohio Department of Natural Resources, Division of Reclamation (Ohio) submitted proposed Revised Program Amendment No. 25 in response to OSM's findings on Program Amendment No. 25 published in the Federal Register on July 17, 1987 (52 FR 26971). The OSM findings at 30 CFR 935.16(d-h) required that an amendment to the Ohio program be submitted by October 17, 1987 to address the deficiencies found in Program Amendment No. 25.

OSM announced receipt of proposed Revised Program Amendment No. 25 in the December 10, 1987 Federal Register (52 FR 46783), and, in the same notice, opened the public comment period and provided opportunity for a public hearing on the adequacy of the proposed amendment.

Revised Program Amendment No. 25 included narrative information intended to address the program requirement at 30 CFR 935.16(f) that Ohio amend its program to include a statistically valid technique to evaluate revegetation success. During review of the proposed amendment, OSM identified concerns about insufficient support for Ohio's method of evaluating success of revegetation. OSM notified Ohio of these concerns by letter dated March 7, 1988.

This letter indicated that, in response to Ohio's request, OSM agreed to conduct a study of the Ohio method of evaluating revegetation success and would defer final action on this concern until the study was completed.

In a letter dated July 28, 1988, OSM indicated that, due to the severe drought, the study on the Ohio method of evaluating revegetation success had been delayed. OSM forwarded a final report on the study to Ohio by letter dated June 30, 1989 (Administrative Record No. OH-1196). The study determined that the Ohio method was not as effective as a statistically valid method.

On December 15, 1989 (54 FR 51395) the Director of OSM announced his decision on Ohio's Revised Program Amendment No. 25. In that decision, the Director found that Ohio had not demonstrated that its method of evaluating the success of revegetation is no less effective than the Federal rules at 30 CFR 816.116(a). The Director therefore continued the requirement at 30 CFR 935.16(f) that Ohio amend its program to include a statistically valid technique to evaluate revegetation success and provided additional time for Ohio to amend its program.

By letter dated December 12, 1989 (Administrative Record No. OH-1245), Ohio proposed revisions to section 1501:13-9-15 of the Ohio Administrative Code (OAC) to include a statistically valid method of evaluating revegetation success in order to satisfy the OSM requirement at 30 CFR 935.16(f). Ohio proposed revisions to paragraph (I)(1) of this rule to specify that, if it is determined by visual inspection of the entire permit area that compliance with ground cover standards is questionable, the ground cover shall be reevaluated using a statistically valid sampling

technique with a ninety per cent statistical confidence interval (i.e. one-sided test with 0.10 alpha error).

On January 8, 1990, OSM published a notice in the *Federal Register* (55 FR 649) announcing receipt of proposed Revised Program Amendment No. 25 and inviting public comment on its adequacy. The public comment period ended on February 7, 1990. The public hearing scheduled for February 2, 1990 was not held because no one requested an opportunity to testify.

By letter dated March 23, 1990 (Administrative Record No. OH-1292), OSM notified Ohio that the proposed revisions to OAC section 1501:13-9-15(I)(1) were less effective than the Federal regulations at 30 CFR 816.116(a) since Ohio proposed to use statistically valid sampling methods only on "questionable" areas. OSM required Ohio to revise the proposed rule to require use of statistically valid sampling techniques in all situations regardless of the outcome of any prior or accompanying ocular evaluation.

By letter dated July 24, 1990 (Ohio Administrative Record No. OH-1343), Ohio submitted further proposed revisions to OAC section 1501:13-9-15 which are intended to respond to OSM's comments of March 23, 1990 about proposed Revised Program Amendment No. 25 and to make the proposed rule as effective as the corresponding Federal regulations. Ohio is proposing three changes to this rule:

(1) Ohio is revising paragraph (I)(1) to specify that success of revegetation shall be measured using a statistically valid sampling technique with a 90-percent statistical confidence interval (i.e. one-sided test with 0.10 alpha error).

(2) Ohio is revising paragraph (I)(1) to specify that success of revegetation shall be judged, in part, on the applicable requirements for phased bond release.

(3) Ohio is revising paragraph (I)(3)(c)(iv) to delete the requirement that, for Phase III bond release, species planted must meet the standard that no single area with less than 30-percent cover shall exceed the lesser of three thousand square feet or 0.3 percent of the land affected.

III. Public Comment Procedures

In accordance with the provisions of 30 CFR 732.17(h), OSM is now seeking comment on whether the amendments proposed by Ohio satisfy the applicable program approval criteria of 30 CFR 732.15. If the amendments are deemed adequate, they will become part of the Ohio program.

Written Comments

Written comments should be specific, pertain only to the issues proposed in this rulemaking, and include explanations in support of the commenter's recommendations. Comments received after the time indicated under "DATES" or at locations other than the Columbus Field Office will not necessarily be considered in the final rulemaking or included in the Administrative Record.

Public Hearing

Persons wishing to comment at the public hearing should contact the person listed under "FOR MORE INFORMATION CONTACT" by 4 p.m. on August 27, 1990. If no one requests an opportunity to comment at a public hearing, the hearing will not be held.

Filing of a written statement at the time of the hearing is requested as it will greatly assist the transcriber. Submission of written statements in advance of the hearing will allow OSM officials to prepare adequate responses and appropriate questions.

The public hearing will continue on the specified date until all persons scheduled to comment have been heard. Persons in the audience who have not been scheduled to comment and who wish to do so will be heard following those scheduled. The hearing will end after all persons scheduled to comment present in the audience who wish to comment have been heard.

Public Meeting

If only one person requests an opportunity to comment at a hearing, a public meeting, rather than a public hearing, may be held. Persons wishing to meet with OSM representatives to discuss the proposed amendments may request a meeting at the Columbus Field Office by contacting the person listed under "FOR FURTHER INFORMATION CONTACT." All such meetings shall be open to the public and, if possible, notices of the meeting will be posted at the locations listed under "ADDRESSES." A written summary of each public meeting will be made a part of the Administrative Record.

List of Subjects in 30 CFR Part 935

Coal mining, Intergovernmental relations, Surface mining, Underground mining.

Dated: July 31, 1990.

Carl C. Close,

Assistant Director, Eastern Field Operations.
[FR Doc. 90-18812 Filed 8-9-90; 8:45 am]

BILLING CODE 4310-05-M

DEPARTMENT OF DEFENSE

Corps of Engineers, Department of the Army

36 CFR Part 327

Shoreline Management Fees at Civil Works Projects

AGENCY: U.S. Army Corps of Engineers, DOD.

ACTION: Notice of proposed rulemaking.

SUMMARY: This fee schedule for shoreline management at civil works projects is proposed to supersede the current fee schedule. The fee schedule is revised to comply with Office of Management and Budget Circular A-25, User Charges. The proposed rule will increase the cost of shoreline management permits to current and future permit holders. This action is necessary to enable the Federal Government to recover a greater portion of the actual cost of issuing shoreline management permits. The intended effect of this action is to provide some equity to existing shoreline management permittees and charge new permittees a fee closer to the actual cost.

DATES: Comments must be submitted on or before September 24, 1990.

ADDRESSES: Office of the Chief of Engineers, ATTN: CECW-ON, 20 Massachusetts Avenue NW., Washington, DC 20314-1000.

FOR FURTHER INFORMATION CONTACT: Mr. Darrell Lewis, (202) 272-0247.

SUPPLEMENTARY INFORMATION: 36 CFR 327.30, Lakeshore Management at Civil Works Projects was published in the *Federal Register* in December 1974, stated in part that " * * * As permits become eligible for renewal after July 1, 1976, a charge of \$10 for each new permit and a \$5 annual fee for inspection of floating facilities will be made. There will be no annual inspection fee for permits for vegetation modification on lakeshore areas. In all cases the total administrative charge will be collected initially at the time of permit issuance rather than on a piecemeal annual basis." The cost of a 5-year permit was \$30.

On 8 June 1988, a proposed rule was published in the *Federal Register* (53 FR 21495) which called for the fee schedule for Shoreline management permits to be published separately from 36 CFR 327.30. A final rule was published in the *Federal Register* on July 27, 1990 (55 FR 30690).

Office of Management and Budget Circular A-25, requires that when a service (or privilege) provides special

benefits to an identifiable recipient beyond those that accrue to the general public, a charge will be imposed to recover the full cost to the Federal Government for providing the special benefits.

The fee schedule will appear in § 327.31, a new section.

As stated in § 327.30 appendix A(2)(a), fees shall be paid prior to issuing the permit.

Permits will be issued for a 5 year period to reduce costs to the permittee.

When an applicant receives a permit that covers more than one activity and/or facility, only a single permit covering all the activities/facilities will be issued. One fee will be charged as if the permit was for a single activity/facility. If both a floating facility and vegetation modification are combined on one permit, only the fee for a floating facility will be charged.

The fees for Shoreline Management permits issued in accordance with 36 CFR 327.30, are as follows:

New Facility—A one time fee of \$400 plus \$15 per year periodic inspection fee (payable in advance for 5 year increments).

New Owner—A one time fee of \$200 plus \$15 per year periodic inspection fee (payable in advance for 5 year increments).

Facility Modifications—A one time fee of \$100 plus \$15 per year periodic inspection fee (payable in advance for 5 year increments).

Facility Renewal—\$15 per year periodic inspection fee (payable in advance for 5 year increments).

Vegetation Modification—New Permit—A one time fee of \$200 plus \$15 per year periodic inspection fee (payable in advance for 5 year increments).

Vegetation Modification—New Adjacent Land Owner—A one time fee of \$100 plus \$15 per year periodic inspection fee (payable in advance for 5 year increments).

Vegetation Modification—Permit Renewal—\$15 per year periodic inspection fee (payable in advance for 5 year increments).

Fees will not be assessed for permits for erosion control structures because the government, the public, and the permittee all benefit directly or indirectly from the construction of erosion control structures.

If a permittee terminates his/her permit before expiration date, no refund will be made for the unused portion of the permit.

The cost of administering a permit for vegetation modification alone is less than for a floating facility. The fee schedule reflects the difference.

List of Subjects in 36 CFR Part 327

Penalties, Recreation and recreation areas, Water resources.

Compliance with Executive Order 12291 and the Regulatory Flexibility Act

The Department of the Army has determined that this document is not a major rule under E.O. 12291 and certifies that this document will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*).

For the reasons set out in the preamble, the U.S. Army Corps of Engineers proposes to amend 36 CFR part 327 as set forth below.

PART 327—[AMENDED]

1. The authority citation for part 327 continues to read as follows:

Authority: The Rivers and Harbors Act of 1894, as amended and supplemented (33 U.S.C. 1).

2. Section 327.30 is proposed to be amended by revising the last sentence of paragraph (k) to read as follows:

§ 327.30 Shoreline management on civil works projects.

(k) *** The fee schedule is published in § 327.31.

* * * * *

3. Section 327.31 is proposed to be added as follows:

§ 327.31 Shoreline management fee schedule.

(a) **Applicability.** This fee schedule is applicable to all permits issued in accordance with § 327.30, Shoreline Management at Civil Works Projects.

(b) **Fee schedule.** The fee schedule is as follows:

[In dollars]

Type of permit	One time fee	Periodic fees ¹
Facilities:		
New facility	400	15/year
New owner	200	15/year
Facility modification	100	15/year
Permit renewal	0	15/year
Vegetation modification:		
New permit	200	15/year
New adjacent owner	100	15/year
Permit renewal	0	15/year
Erosion control	0	0

¹ Periodic Fees (Inspection fees) are set at \$15 per year and are payable in advance for 5 year increments.

Approved:

Albert J. Genetti, Jr.

Colonel, Corps of Engineers, Chief of Staff.

[FR Doc. 90-18229 Filed 8-9-90; 8:45 am]

BILLING CODE 3710-08-M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[AL-014; FRL-3819-3]

Approval and Promulgation of Implementation Plans; Alabama: Ozone Plan Revisions for Jefferson County

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: On March 3, 1978 (43 FR 8962), EPA designated Jefferson County, Alabama, as nonattainment for ozone. The State submitted State Implementation Plan (SIP) revisions designed to achieve the ozone standard; however, this control strategy did not result in attainment of the National Ambient Air Quality Standards (NAAQS) by December 31, 1982. Consequently, on February 24, 1984, EPA notified the Governor of Alabama that the SIP was substantially inadequate to achieve the NAAQS for ozone in Jefferson County and called upon the State to revise its SIP. The Alabama Department of Environmental Management (ADEM) submitted a final SIP revision to EPA on November 21, 1985. However, delays due to the determination that the Jefferson County regulations were not yet enforceable by the State prevented prompt review of the SIP submittal by EPA. On April 8, 1987, the Alabama Environmental Management Commission adopted the Jefferson County VOC regulations. On April 20, 1987, ADEM submitted the completed package to EPA for approval. This SIP submittal from ADEM is a comprehensive package which included all the regulations within Chapter 8—Control of Volatile Organic Compounds, and a control strategy demonstrating attainment for ozone NAAQS by December 31, 1987. This submittal required approval or disapproval by EPA of each regulation within chapter 8 and of the control strategy demonstration. Since the Jefferson County area did not attain the standard, the control strategy is inadequate.

Therefore, EPA is at this time proposing to approve the regulations within Chapter 8—Control of Volatile Organic Compound Emissions that satisfactorily meet the Control Technique Guidelines (CTG)/Reasonable Available Control Technology (RACT) requirements and subsequent regulations and policy for nonattainment areas. The regulations proposed for approval are listed in the Supplemental Information section of this

notice. Upon review of the submittal, several regulations were identified as being deficient and therefore cannot be approved at this time. ADEM was notified of the identified deficiencies and asked to withdraw the regulations that were identified as being deficient. ADEM requested that EPA disapprove the regulations containing deficiencies. EPA is proposing disapproval of the regulations identified as being deficient as well as the control strategy in a separate Federal Register notice. The public is invited to submit written comments on the proposed actions.

DATES: To be considered, comments must be submitted by September 10, 1990.

ADDRESSES: Written comments should be addressed to Diane Altman of EPA Region IV's Air Programs Branch (see EPA Region IV address below). Copies of the materials submitted by Alabama may be examined during normal business hours at the following locations:

Environmental Protection Agency,
Region IV, Air Programs Branch, 345
Courtland Street NE., Atlanta, Georgia
30365.

Air Division, Alabama Department of
Environmental Management, 1751
Congressman William L. Dickinson
Drive, Montgomery, Alabama 36130.
Jefferson County Department of Health,
1400 Sixth Avenue, South, P.O. Box
2646, Birmingham, Alabama 35202.

FOR FURTHER INFORMATION CONTACT:
Diane Altman, Air Programs Branch,
EPA Region IV, at the above address
and telephone number 404/347-2864 or
FTS 257-2864.

SUPPLEMENTAL INFORMATION: On March 3, 1978 (43 FR 8962), EPA designated Jefferson County, Alabama, as nonattainment for ozone. The State was subsequently required to revise its ozone State Implementation Plan (SIP) for Jefferson County. Alabama officially submitted the SIP revisions to EPA on April 19, 1979. On June 3, 1980 (43 FR 37430), EPA announced final approval of the Alabama ozone SIP. The State had calculated that an 18.2% reduction in hydrocarbon emissions was needed to achieve the ozone standard in Jefferson County by December 31, 1982.

However, the control strategy for ozone referenced above did not result in attainment of the NAAQS for ozone by December 31, 1982. Consequently on February 24, 1984, EPA notified the Governor of Alabama that the SIP was substantially inadequate to achieve the NAAQS for ozone in Jefferson County and called upon the State to revise the SIP. ADEM submitted the final SIP revision to EPA on November 21, 1985.

During EPA's review of the submittal, it was determined that the revised Jefferson County VOC regulations were not enforceable by the State. Therefore, on August 26, 1986, ADEM was advised that the SIP revision was not approvable. On April 15, 1987, the Alabama Environmental Management Commission signed a resolution adopting the Jefferson County rules as a part of the State VOC regulations and on April 20, 1987, ADEM resubmitted the SIP revision to EPA. The State submittal included numerous individual RACT regulations as well as a demonstration that Jefferson County would attain the ozone standard by December 31, 1987. However, current data indicate that the area has not yet attained the standard. Thus, EPA cannot now approve the attainment demonstration. However, EPA is proposing to approve those RACT regulations that meet all applicable criteria because such regulations will provide significant emission reductions in Jefferson County and will help the area make reasonable further progress toward attainment of the ozone standard as expeditiously as practicable.

We are proposing to approve the following regulations within Chapter 8—Control of Volatile Organic Compound Emissions that satisfactorily meet Control Technique Guidelines (CTG)/Reasonable Available Control Technology (RACT) requirements and subsequent regulations and policy for nonattainment areas:

Applicability.....	8.1.1(a), 8.1.1(b)(1)
VOC Water Separation.....	8.2.1
Loading and Storage of VOC.....	8.3.2(a), 8.3.2(b)(1), 8.3.2(b)(2), 8.3.2(c), 8.3.3
Fixed-Roof Petroleum Liquid Storage Vessels.....	8.4.1, 8.4.2, 8.4.3, 8.4.4(a), 8.4.4(c) through (f)
Bulk Gasoline Plants.....	8.5.1, 8.5.2, 8.5.3(b), 8.5.4, 8.5.5, 8.5.6, 8.5.7, 8.5.8
Bulk Gasoline Terminals.....	8.6.1, 8.6.2, 8.6.3 (a)(1) and (a)(2), 8.6.3 (b) through (e), 8.6.4, 8.6.5
Gasoline Dispensing Facilities—Stage I Control.....	8.7.1, 8.7.2, 8.7.3, 8.7.4 (a) and (b), 8.7.5 (a) through (d), 8.7.6, 8.7.7
Petroleum Refinery Sources.....	8.8.1, 8.8.3, 8.8.5(b)
Surface Coating—Can Coating.....	8.11.1
Coil Coating.....	8.11.2
Metal Furniture Coating.....	8.11.3
Surface Coating of Large Appliances.....	8.11.4
Paper Coating.....	8.11.6 (a) and (c)

Fabric and Vinyl Coating.....	8.11.7
Magnet Wire Coating.....	8.11.8 (a) and (c)
Compliance Methods.....	8.11.9 (a)(1) and (a)(2)
Flatwood Paneling.....	8.11.10
Miscellaneous Metal Parts and Products.....	8.11.11
Solvent Metal Cleaning.....	8.12.1, 8.12.2, 8.12.3, 8.12.4 (a) and (b), 8.12.4 (c)(1) and (c)(2), 8.12.4 (d) through (h), 8.12.5 (a) and (b), 8.12.5 (c)(1) through (c)(4), 8.12.5 (d) through (n), 8.12.6 (a), 8.12.6 (b)(1) and (b)(2), 8.12.6 (c) through (k)
Cutback Asphalt.....	8.13.1, 8.13.2(b)
Compliance Schedules.....	8.15.1 (a) and (b), 8.15.2 (a)(1) through (a)(6), 8.15.2 (b) and (c), 8.15.3, 8.15.4 (a) and (b), 8.15.4 (d) and (e), 8.15.5, 8.15.6
Manufacture of Pneumatic Rubber Tires.....	8.17.1, 8.17.2, 8.17.3 (b) and (c), 8.17.4
Manufacture of Synthesized Pharmaceutical Products.....	8.18
Pechloroethylene Dry Cleaning Systems.....	8.19.1, 8.19.2, 8.19.4, 8.19.5, 8.19.6
Leaks From Gasoline Tank Trucks and Vapor Collection Systems.....	8.20
Leaks From Petroleum Refinery Equipment.....	8.21.1 through 8.21.10, 8.21.14
Graphic Arts.....	8.22
Petroleum Liquid Storage in External Floating Roof Tanks.....	8.23.1 (a) through (g), 8.23.1 (j), 8.23.2, 8.23.3, 8.23.4(a), 8.23.4 (b)(1) and (b)(2), 8.23.4 (c) through (f), 8.23.5(a), 8.23.5(b), 8.23.6, 8.23.7, 8.23.8
Large Petroleum Dry Cleaners.....	8.24
Leaks From Coke By-Product Recovery Plant Equipment.....	8.26
Emissions From Coke By-Product Recovery Plant Coke Oven Gas Bleeder.....	8.27
Manufacture of Laminated Countertops.....	8.28
Paint Manufacture.....	8.29
Gasoline Dispensing Facilities.....	8.30.1 (b) and (c), 8.30.2 through 8.30.7, 8.30.9 through 8.30.11
Seasonal Afterburner Shutdown.....	8.31

The submitted regulations were review based on EPA's Control Techniques Guideline documents for various VOC source categories. Several regulations were identified as being deficient and therefore are not being approved at this time. EPA is proposing disapproval of the deficient regulations in a separate **Federal Register** notice, along with the deficit attainment demonstration. The revisions that satisfactorily meet the Control Technique Guidelines (CTG/Reasonable Available Control Technology (RACT) requirements and subsequent regulations and policy are current proposed for approval at this time in order not to delay or deter compliance and enforcement efforts.

Proposed Action

EPA is proposing to approve the Jefferson County VOC regulations listed in the **SUPPLEMENTAL INFORMATION** section of this notice. The approvable revisions satisfactorily meet the Control Technique Guidelines (CTG)/Reasonable Available Control Technology (RACT) requirements and subsequent regulations and policy for nonattainment areas.

The public is invited to participate in this rulemaking by submitting written comments on these proposed actions.

Under 5 U.S.C. section 605(b), I certify that this approval action will not have a significant economic impact on a substantial number of small entities. (See 46 FR 8709.)

The Office of Management and Budget has exempted this rule from the requirements of section 3 of Executive Order 12291.

List of Subjects in 40 CFR Part 52

Air pollution control, Intergovernmental relations, Hydrocarbons, Ozone, Reporting and recordkeeping requirements.

Joe R. Franzmathes,
Acting Regional Administrator.

Part 52 of chapter 1, title 40 of the Code of Federal Regulations is amended as follows:

PART 52—[AMENDED]

1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401-7642.

2. Section 52.50 is amended by adding paragraph (c)(52) to read as follows:

§ 52.50 Identification of plan.

* * * * *

(c) * * *

(52) Revisions to the Jefferson County VOC regulations were submitted on

April 20, 1987, by the Jefferson County Department of Health.

(i) *Incorporation by reference.* (A) Revisions to the Jefferson County (Birmingham) VOC regulations were adopted by the Alabama Environmental Management Commission on April 8, 1987.

(B) Letter of April 10, 1987 from Jefferson County Department of Health.

(ii) Other materials—none.
[FR Doc. 90-18682 Filed 8-9-90; 8:45 am]

BILLING CODE 6560-50-M

40 CFR Part 280

[FRL-3819-7]

Underground Storage Tanks Containing Petroleum; Financial Responsibility Requirements

AGENCY: Environmental Protection Agency (EPA).

ACTION: Extension of comment period.

SUMMARY: This notice announces an extension of the public comment period on EPA's proposal to establish four alternative mechanisms for use by local governments to demonstrate financial responsibility for taking corrective action and compensating third parties for bodily injury and property damage caused by sudden and nonsudden accidental underground storage tank releases. This proposed rule was published in the **Federal Register** on June 18, 1990 (55 FR 24692) and established a closing date for comments of August 17, 1990.

DATES: The public comment period is extended 30 days and will remain open through September 10, 1990.

ADDRESSES: Comments may be mailed to the Docket Clerk [Docket No. UST-3], Office of Underground Storage Tanks (OS-400), U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460. Comments received by EPA may be inspected in the public docket, located in Room 2427 (Mall), U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460, from 9 a.m. to 4 p.m., Monday through Friday, excluding Federal holidays.

FOR FURTHER INFORMATION CONTACT: The RCRA/Superfund Hotline at (800) 424-9346 (toll free) or (202) 382-3000 in Washington, DC.

Dated: August 3, 1990.

Mary A. Gade,
Acting Assistant Administrator.

[FR Doc. 90-18838 Filed 8-9-90; 8:45 am]

BILLING CODE 6560-50-M

FEDERAL EMERGENCY MANAGEMENT AGENCY

44 CFR Part 67

[Docket No. FEMA-6990]

Proposed Flood Elevation Determinations, TX; Correction

AGENCY: Federal Emergency Preparedness Management Agency.

ACTION: Proposed rule; correction.

SUMMARY: This document corrects a Notice of Proposed Determinations of base (100-year) flood elevations previously published at 55 FR 19964 on May 14, 1990. This correction notice provides a more accurate representation of the Flood Insurance Study and Flood Insurance Rate Map for the Unincorporated Areas of Brewster County, Texas.

FOR FURTHER INFORMATION CONTACT: John L. Matticks, Chief, Risk Studies Division, Federal Insurance Administration, Federal Emergency Management Agency, Washington, DC 20472, (202) 646-2767.

SUPPLEMENTARY INFORMATION: The Federal Emergency Management Agency gives notice of the correction to the Notice of Proposed Determinations of base (100-year) flood elevations for selected locations in Brewster County, previously published at 55 FR 19964 on May 14, 1990, in accordance with section 110 of the Flood Disaster Protection Act of 1973 (Pub. L. 93-234), 87 Stat. 980, which added Section 1363 to the National Flood Insurance Act of 1968 (Title XIII of the Housing and Urban Development Act of 1968 (Pub. L. 90-448)), 42 U.S.C. 4001-4128, and 44 CFR Part 67.

List of Subjects in 44 CFR Part 67

Flood insurance, Floodplains.

The entries under Brewster County (Unincorporated Areas), are correctly revised to read as follows:

Source of Flooding and Location	#Depth in feet above ground. Elevation in feet (NGVD)
Moss Creek: Approximately 1,300 feet downstream of U.S. Route 67 & 90	*4,429
Approximately 2,200 feet upstream of divergence of West Moss Creek	*4,558

Source of Flooding and Location	#Depth in feet above ground. Elevation in feet (NGVD)
.	.
.	.
.	.
.	.

Issued: July 31, 1990.

Harold R. Duryee,
Administrator, Federal Insurance
Administration.

[FR Doc. 90-18828 Filed 8-9-90; 8:45 am]

BILLING CODE 6718-03-M

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Ch. 1

[CC Docket No. 90-337; FCC 90-265]

RIN 3060-AE03

Common Carrier Services: In the Matter of Regulation of International Accounting Rates

AGENCY: Federal Communications
Commission.

ACTION: Proposed rule.

SUMMARY: On July 12, 1990, the Commission adopted a Notice of Proposed Rulemaking seeking comment on whether the Commission should consider modifications to the regulatory treatment of U.S. carrier accounting and settlement arrangements with their foreign correspondents. The intended effect of the proceeding is to promote lower, more cost-based, international accounting and collection rates.

DATES: Comments are due on or before October 12, 1990. Reply comments are due on or before November 13, 1990.

ADDRESSES: Federal Communications Commission, 1919 M St., NW., Washington, DC 20554.

FOR FURTHER INFORMATION CONTACT: William J. Kirsch, Deputy Assistant Bureau Chief—International, Common Carrier Bureau, (202) 632-3214, or Michael A. Mandigo, Attorney/Advisor, International Policy Division, Common Carrier Bureau, (202) 632-3214.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Notice of Proposed Rulemaking adopted July 12, 1990, and released August 7, 1990.

The following collection of information contained in this proposed rule has been submitted to the Office of Management and Budget for review under section 3504(h) of the Paperwork Reduction Act. Copies of the submission may be purchased from the Commission's copy contractor,

International Transcription Service, (202) 857-3800, 2100 M St., NW., Suite 140, Washington, DC 20037. Persons wishing to comment on this information collection should direct their comments to Eyvette Flynn, (202) 395-3785, Office of Management and Budget, Room 3235 NEOB, Washington, DC 20503. A copy of any comments should also be sent to the Federal Communications Commission, Office of Managing Director, Washington, DC 20554. For further information contact Jerry Cowden, Federal Communications Commission (202) 632-7513.

OMB Number: None.

Title: Regulation of International Accounting Rates (CC Docket No. 90-337).

Action: Proposed New Collection.
Respondents: Businesses or other for profit.

Frequency of Response: On occasion.
Estimated Annual Burden: 100 responses; 200 hours total; 2 hours average burden per response.

Needs and Uses: The NPRM proposes to reform existing regulation of International Settlement arrangements to make it easier for U.S. carriers engaged in international telecommunications to negotiate lower accounting rates. The Notice proposes allowing simple reductions in international accounting rates based on a notification approach that would eliminate any actual or perceived Commission barriers to lower international accounting rates and requiring carriers that initiate a resale arrangement with a foreign administration that would permit interconnection of a private line with the U.S. public switched telephone network. The information will be used for monitoring and enforcement purposes.

Summary of Notice of Proposed Rulemaking

The Notice of Proposed Rulemaking proposes to modify the FCC's regulation of international accounting rates that U.S. carriers use to settle accounts with foreign telecommunications administrations in order to promote lower, more cost-based, international accounting and collection rates.

Section 1 of the Communications Act of 1934, as amended, directs the Commission to exercise its regulatory authority over interstate and foreign telecommunications "so as to make available, so far as possible, to all people of the United States a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges * * * 47 U.S.C. 151. The

Commission has sought to carry out the statutory mandate set forth in section 1 by establishing an increasingly competitive market structure in domestic and international telecommunications.

The Commission recognizes that all of the cost and pricing issues associated with the introduction of competition into the U.S.-based international telecommunications services market have not yet been fully resolved. The Commission tentatively concludes that in examining these issues it should be guided by the same types of objectives it has used in the past to examine repricing issues, such as: (1) Universal service; (2) the prevention of uneconomic bypass; (3) the encouragement of network efficiency; and (4) the elimination of unjust discrimination or unlawful preferential rates. The Commission invites parties to comment on these objectives, additional or alternative objectives, and its tentative conclusion that such objectives should guide the establishment of regulatory policies in this area.

The Commission believes that by pursuing these, and other, longstanding regulatory objectives, it will promote the goals established by this Commission that include, *inter alia*, encouraging the development of a competitive, innovative and excellent American communications system and promoting the vital interests of the American people in international communications. The Commission believes that these goals may be imperiled by the current above-cost international accounting rate structure. In particular, the Commission is concerned that although U.S. International Message Telephone Service (IMTS) prices may appear relatively low in comparison to foreign calling prices to the United States, the above-cost international accounting rate structure appears to be the primary reason that U.S. international calling prices are significantly higher than U.S. domestic rates.

As a result, the Commission tentatively concludes that lower, more cost-based, international accounting and collection rates should be the focus of its regulatory effort. Specifically, the Commission proposes a three-part reform of its existing International Settlements Policy (ISP) to bring international accounting rates closer to the cost of providing international telecommunications services and to reduce U.S. international calling prices by perhaps as much as fifty percent.

First, it proposes to add a new procedural option to its oversight under the ISP of U.S. carrier international

accounting and settlement arrangements. Specifically, in order to remove any existing or potential regulatory impediments to lower, more cost-based, accounting rates, the Commission proposes to implement a notification option for simple mathematical reductions in the accounting rate with a single foreign administration. Under this proposed option a U.S. carrier would be required to file a letter with the Commission noting: (1) The applicable international service; (2) the foreign telecommunications administration; (3) the present accounting rate; (4) the new accounting rate; (5) the prospective effective date; (6) that the accounting rate will be divided 50-50; and (7) that there has been no other change in the operating agreement with the foreign correspondent.

Moreover, under the proposed notification approach, an exclusive arrangement would not be permitted—that is, if a foreign telecommunications administration implements a lower accounting rate with one U.S. carrier, it must be prepared to offer the same rate to all U.S. carriers serving that country. Furthermore, under the proposed notification approach, U.S. carriers would be required to "accept" only their proportionate share of return traffic from a given country. Finally, in order to ensure compliance with these rules, U.S. carriers would be required to incorporate sworn statements concerning these non-exclusivity and proportionate return requirements into their notification letters. The Notice invites parties to comment on this proposed notification option, including the likelihood that a notification option alone will result in lower, and more cost-based, international accounting rates.

Second, the Commission proposes to streamline its examination of ISP waiver requests by reducing, where possible, the amount of time necessary for review of other, more complex, reductions. Specifically, it proposes to apply a 21-day waiver review procedure to all international telecommunications services currently subject to the ISP. Moreover, the Commission proposes to give more definitive guidance to the Common Carrier Bureau concerning whether to grant such requests. Under this proposed approach, the Commission would expect to grant waivers only if there is a change that results in a more cost-based accounting rate. Further, in order to demonstrate the Commission's strong interest in reducing international calling prices that have remained too high under existing accounting and

settlement arrangements, it proposes to rely on a single additional criterion—whether there is a firm carrier commitment to lower international calling prices. The Commission invites parties to comment on the proposed approach, including whether the commitment to lower calling prices should apply to the U.S. carrier, its foreign correspondent, or both, and how such a commitment could best be implemented. The Commission also invites parties to comment on whether additional criteria should be considered and to provide specific suggestions only if such criteria would directly promote one or more of the objectives set forth in this proceeding.

Third, the Commission proposes exploring the use of existing International Telecommunications Union (ITU) Regulations and International Telegraph and Telephone Consultative Committee (CCITT) Recommendations to promote reductions in international collection and accounting rates between the United States and other countries. In particular, the Commission invites parties to comment on the extent to which Article 6.1 and Article 6.2 of the new International Telecommunication Regulations serve as a basis for seeking bilateral collection and accounting rate reductions between the United States and other ITU member countries. Specifically, the Commission invites parties to provide information on the average total cost of providing different services between the United States and other countries. In addition, the Commission invites parties to provide specific information on current intra-European and intra-Asian telephone accounting rates that reportedly are approximately half prevailing standard U.S.-Europe and U.S.-Asia accounting rates. And it invites parties to comment on the extent to which the Commission may rely on these existing intra-continental accounting rates to take regulatory action to provide for lower, and most cost-based, U.S. inter-continental accounting rate arrangements. Furthermore, the Commission recognizes that there is important ongoing work in a variety of CCITT Study Groups, including Study Group III—Tariff and Accounting Principles, and it invites parties to comment whether the Commission should recommend that U.S. delegations to the CCITT seek revision of any language in any existing, or proposed, CCITT Recommendations in order to clarify that international accounting rates should be cost-based and that all countries should exercise their best

efforts to minimize the national cost of providing international telecommunications services.

The Commission also recognizes that the revision of CCITT Recommendation D.1 to permit unlimited resale and shared use of leased lines internationally would result in the immediate benefits of lower, and more cost-based, accounting and collection rates for international telecommunications services. The Commission strongly supports the recent U.S. contribution to CCITT Study Group III that provides, *inter alia*, that international provide leased circuits should be offered to all customers on the basis of the cost of providing such services, available on a flat-rate basis, and subject to customers deriving channels according to their requirements, including any customer interconnection requirements. Nevertheless, the Commission recognizes that a number of countries may prefer to retain national restrictions in order to preserve the present above-cost international accounting rate structure. While the Commission is encouraged by movement towards permitting two-way resale and shared use represented, for example, by the recent Canadian regulatory decision, Telecom Decision CRTC 90-3 (March 1, 1990), it tentatively concludes that the continuing prohibition of resale between the United States and overseas markets serves as a barrier to the implementation of lower, more cost-based, international accounting rates.

The Commission is concerned that the continuation of existing resale restrictions by overseas foreign administrations permits them to ignore relevant cost trends that would otherwise result in lower, more cost-based international accounting rates and international calling prices. It is even more concerned that there may be countries that seek unilaterally to alter existing accounting rate arrangements by permitting one-way resale in order to evade the requirements of the ISP. As a result, the Commission proposes to require that carriers that initiate a resale arrangement with a foreign administration that would permit interconnection of a private line with the U.S. public switched network provide the Commission with a written copy of the arrangement, including domestic interconnection arrangements, prior to the actual initiation of such service. Moreover, should other countries unilaterally attempt to alter the IMTS accounting rate by permitting one-way resale to evade the ISP or continue to ignore international cost

trends that require lower, more cost-based, international accounting rates and calling prices, the Commission is prepared to take appropriate regulatory action.

The Commission observes that the Communications Act provides it with broad authority to regulate international telecommunications services, including international accounting rates. Section 201(a) provides authority, for example, to establish, where necessary or desirable in the public interest, through routes and charges applicable thereto and the division of such charges. Similarly, section 201(b) provides authority to address, *inter alia*, whether charges for interstate or foreign communication by wire or radio are just and reasonable. Moreover, section 205 provides authority to determine and prescribe what is a just and reasonable charge under certain circumstances. Finally, section 214 provides authority, *inter alia*, to condition Commission grants for certificates for the construction or operation of international facilities as the public convenience and necessity may require.

As a result, the Commission tentatively concludes that it has the authority to establish international accounting rates, to determine and prescribe just and reasonable accounting rates, and, if necessary, condition section 214 grants on the implementation of lower, more cost-based accounting rates. The Commission also tentatively concludes that it would be most likely to exercise this authority only in situations in which: (1) a foreign government or telecommunications administration permits one-way resale and thereby evades the ISP; (2) a foreign government or telecommunications administration maintains an accounting rate that ignores relevant cost trends; or (3) a foreign government or telecommunications administration maintains a large asymmetry in international ceiling prices with the United States. The Commission invites parties to comment on these tentative conclusions, and the legal and policy issues associated with the Commission exercising its authority in this area. In particular, the Commission seeks the views of the executive branch or any potential foreign policy, trade, commercial, or other implications of such proposed regulatory actions and the most appropriate mechanism or mechanisms to ensure that all the views of executive branch agencies have been considered. The Commission also invites parties to comment on the implications of its proposed approach on the facilities review process, including

whether common carrier use of any or all cable facilities should be subject to conditions, such as reductions in international accounting rates and international ceiling prices, similar to that used by the Commission in its review of TAT-5.

Federal Communications Commission.

Donna R. Searcy,

Secretary.

[FR Doc. 90-18857 Filed 8-9-90; 8:45 am]

BILLING CODE 6712-01-M

47 CFR Part 73

[MM Docket No. 90-263; DA 90-1062]

Broadcast Service; Abuse of Process re: Settlement Agreements

AGENCY: Federal Communications Commission.

ACTION: Proposed rule; extension of comment period.

SUMMARY: This action extends the deadline for comments and reply comments in the Notice of Proposed Rulemaking regarding settlement agreements among applicants for construction permits in MM Docket No. 90-263, 55 FR 28918 (July 16, 1990) from August 23, 1990, and September 7, 1990, to September 14, 1990, and October 15, 1990, respectively. The Federal Communications Bar Association requested the extension to enable it to develop a consensus of its membership, necessary to prepare its comments.

DATES: Comments are now due on September 14, 1990, and reply comments are now due on October 15, 1990.

ADDRESSES: Federal Communications Commission, Washington, DC 20554.

FOR FURTHER INFORMATION CONTACT: Eugenia Hull, Policy and Rules Division, Mass Media Bureau, (202) 632-7792.

In the matter of Amendment of § 73.3525 of the Commission's Rules Regarding Settlement Agreements Among Applicants for Construction Permits.

Order

Adopted: August 7, 1990.

Released: August 7, 1990.

By the Chief, Mass Media Bureau:
1. On July 19, 1990, the Federal Communications Bar Association ("FCBA") filed a motion for extension of time, requesting an extension of 32 days within which to file comments in the above-captioned proceeding. In support of its request, the FCBA states that "it will be difficult, if not impossible" for it to develop the consensus of its membership necessary to prepare its comments by the current August 23,

1990, deadline for filing comments in this proceeding.

2. In establishing the comment dates in this proceeding, the Commission stated that "[e]xtensions of these time periods are not contemplated." However, as noted by the General Counsel in granting a similar and related request in Gen. Docket No. 90-264, that admonition must be balanced against the expected value of the FCBA's comments and the organization's need to develop a consensus of its membership. Under these circumstances, we believe that the public interest will be served by extending the comment period to September 14, 1990.

3. Accordingly, *it is ordered*, that the "Motion for Extension of Time" filed by the Federal Communications Bar Association is granted to the extent indicated above.

4. *It is further ordered*, that the time for filing comments in this proceeding is *extended* until September 14, 1990. Reply comments will be due by October 15, 1990.

5. This action is taken pursuant to authority found in sections 4(i), 4(j), and 303(r) of the Communications Act of 1934, as amended, and delegated in §§ 0.204 and 0.283 of the Commission's Rules.

Federal Communications Commission.

Roy J. Stewart,

Chief, Mass Media Bureau.

[FR Doc. 90-18858 Filed 8-9-90; 8:45 am]

BILLING CODE 6712-01-M

INTERSTATE COMMERCE COMMISSION

49 CFR Parts 1043 and 1084

[Ex Parte No. MC-5 (Sub No. 11)]

Revision of Regulations Governing Insurance and Surety Companies Making ICC Filings

AGENCY: Interstate Commerce Commission.

ACTION: Proposed rule; extension of time to file comments.

SUMMARY: By petition filed July 27, 1990, The Scottish Lion Insurance Company Limited of London, England¹ (hereafter called "petitioner") requests a 30-day extension of time (from the current due date of August 15, 1990) for filing comments in response to the Commission's notice of proposed rulemaking served July 16, 1990 regarding insurance and surety

¹ Scottish Line writes motor carrier insurance as a surplus lines carrier in the United States.

companies making ICC filings. The petitioner states that in addition to coordinating information with its representatives in the United States, it is contacting insurers in the London market to obtain their views concerning this proposal. The petitioner states that the extension of time is necessary to enable the parties to carefully consider and make recommendations regarding this proposal. The petitioner has shown good cause for extending the current filing period. Therefore, a 30-day extension will be granted.

DATES: Written comments will now be due on September 14, 1990.

ADDRESSES: Send comments (an original and 10 copies) referring to Ex Parte MC-5 (Sub No. 11) to: Interstate Commerce Commission, Case Control Branch, Office of the Secretary, Washington, DC 20423.

FOR FURTHER INFORMATION CONTACT: Alice K. Ramsay (202) 275-0854, or Heber P. Hardy (202) 275-7148. [TDD for hearing impaired: (202) 275-1721].

Decided:

By the Commission, Edward J. Philbin, Chairman.

Sidney L. Strickland, Jr.,

Secretary.

[FR Doc. 90-18810 Filed 8-9-90; 8:45 am]

BILLING CODE 7035-01-M

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 18

RIN 1018-AA96

Marine Mammals; Incidental Take During Specified Activities

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of receipt of request for rulemaking and request for information.

SUMMARY: The U.S. Fish and Wildlife Service (hereafter, the Service) has received a request from Shell Western E&P Inc. (hereafter, Petitioner or SWEPI) seeking promulgation of regulations to allow the incidental take of small numbers of polar bears and walrus during oil and gas exploratory activities in Alaska State waters and on the Outer Continental Shelf (OCS) during the open water season in the Chukchi Sea adjacent to the coast of Alaska over the next 5 years. The Service is requesting information, suggestions, and comments on whether it is appropriate to issue such regulations and the structure and content of any such regulations.

DATES: Comments on this request should be received no later than September 24, 1990.

ADDRESSES: Comments and materials concerning this request should be sent to the Regional Director, U.S. Fish and Wildlife Service, 1011 East Tudor Road, Anchorage, Alaska 99503. A copy of the Petitioner's request may be obtained by writing to this address, or by writing to the Director, U.S. Fish and Wildlife Service, Division of Fish and Wildlife Management Assistance, Mail Stop 820-ARLSQ, 1849 C Street, NW., Washington, DC 20240.

FOR FURTHER INFORMATION CONTACT: Jon R. Nickles, Supervisor, Marine Mammals Management, Fish and Wildlife Enhancement, U.S. Fish and Wildlife Service, 1011 East Tudor Road, Anchorage, Alaska 99503, telephone (907) 786-3363, or Jeffrey L. Horwath, Wildlife Biologist, Division of Fish and Wildlife Management Assistance, U.S. Fish and Wildlife Service, Mail Stop 820-ARLSQ, 1849 C Street, NW., Washington, DC 20240, telephone (703) 358-1718.

SUPPLEMENTARY INFORMATION: Section 101(a)(5) of the Marine Mammal Protection Act of 1972 (Act), 16 U.S.C. 1361-1407, directs the Secretary of the Interior to allow, on request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made.

This permission may be granted for periods of up to 5 years if the Secretary finds that the total of such taking during the specified period will have a "negligible impact" on the species or stock and will not have an "unmitigable adverse impact" on the availability of the species or stock for subsistence uses. The Secretary is required to prescribe regulations setting forth permissible methods of taking pursuant to such activity, means of affecting the least practicable adverse impact on such species or stock and its habitat and on the availability of the species for subsistence uses, and requirements pertaining to the monitoring and reporting of such taking.

Description of Request

On March 30, 1990, the Service received the request from SWEPI for the incidental take of polar bears (*Ursus maritimus*) and Pacific walrus (*Odobenus rosmarus divergens*). The request, submitted on behalf of SWEPI by the law firm of Jackson & Kelly, Washington, DC, petitions the Service to develop regulations to authorize the

incidental take of small numbers of polar bears and walrus during oil and gas exploration in Alaska State waters or on the OCS in the Chukchi Sea adjacent to the coast of Alaska.

The scope of SWEPI's petition is limited to activities conducted during pre-lease and post-lease exploration for oil and gas resources in Alaska State waters and on the OCS during the open water season in the Chukchi Sea. Excluded from the geographic and seasonal scope of the application is the area within the Chukchi Sea spring lead system during which it is identifiably intact as a marine mammal migratory corridor. The lead system in the Chukchi Sea is located in the shear zone between the shorefast ice and offshore pack ice as described in the Minerals Management Service's Final Environmental Impact Statement for OCS Lease Sale 109 (Chukchi Sea). The petition specifically states that SWEPI, at this time, does not intend to conduct any exploratory drilling or seismic operations within the spring lead system during the excluded period. Activities likely to be conducted include geological and geophysical surveys, drilling of stratigraphic test wells (Continental Offshore Stratigraphic Test (COST) wells), and exploratory drilling for oil and gas together with associated support activities. The petition does not request promulgation of regulations concerning any potential incidental taking from activities involved in the development or production of offshore oil and gas fields.

Potential sources of incidental takings of polar bears and walrus during the carrying out of these activities are: (1) Noise resulting from vessel and aircraft traffic, and geophysical and drilling operations; (2) physical obstruction which could result from drillships, ice management activities or relatively stationary objects; and (3) accidental discharges (i.e., oil spills).

The Petitioner has indicated that it cannot anticipate with any degree of certainty the number of incidental takings or the number of individuals that may be affected by a particular event. SWEPI believes the chance of any interaction during operations with either walrus or polar bears to be extremely small, and the possibility of a lethal take of either species resulting from such interactions remote. With respect to walrus, the number of encounters in a given year is not expected to exceed 200, of which no more than 100 should result in noticeable reactions by the animals. Although no lethal takes are anticipated during any single season, a very small number of events could occur

during the 5-year period resulting in the death of not more than 20 walrus. For polar bears, it appears unlikely that more than 10-15 nonlethal takes will occur during the 5-year period; no lethal takes of polar bears are predicted.

According to SWEPI, none of the potential impacts are anticipated to affect more than a very small percentage of the total population of the two species covered by the petition at any given time, and none of the potential impacts could reasonably be expected to affect adversely the overall population of either species through effects on annual rates of recruitment and survival; consequently none of the possible impacts would have a greater than negligible effect on the species concerned.

The Petitioner predicts that all activities within the scope of the petition

can be conducted in a manner that will not result in an adverse impact on subsistence hunting. However, SWEPI states that in the unlikely event that such impacts might incidentally occur, they are easily mitigable.

The petition outlines certain steps that SWEPI would take regarding monitoring, reporting and research on the effects of their activities on polar bears and walrus as a means of increasing knowledge of these species. Further, the Petitioner pledges close coordination with the Service, other appropriate Federal agencies, the State of Alaska, and Native communities.

Information Requested

The Service requests interested persons, organizations and government agencies to submit comments, information and suggestions concerning

the request and the structure and content of regulations to allow the taking. The Service will consider the information in developing an environmental assessment, determination of effects or rule and, if appropriate, proposed regulations allowing the take of polar bears and walrus incidental to the oil and gas exploratory operations described in SWEPI's petition. Any such proposed regulations will be published in the **Federal Register** with interested parties given ample opportunity to comment.

Dated: August 6, 1990.

Richard N. Smith,

Acting Director, U.S. Fish and Wildlife Service.

[FR Doc. 90-18829 Filed 8-9-90; 8:45 am]

BILLING CODE 4310-55-M

Notices

Federal Register

Vol. 55, No. 155

Friday, August 10, 1990

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF AGRICULTURE

Forest Service

Columbia River Basin Anadromous Fish Management; Idaho, Oregon, Washington

AGENCY: Forest Service, USDA.

ACTION: Notice of availability of management guidelines; request for comments.

SUMMARY: The Northern Intermountain, and Pacific Northwest Regions have jointly developed management guidelines that provide for consistency among the Regions and Forests and will lead to more coordinated management of anadromous fish resources among all fish and land management agencies. The management guidelines will be issued as Regional Supplements to FSH 2609.13, Wildlife and Fisheries Program Management Handbook. Once comments have been received and considered, the management guidelines will be issued. By agreement with the other two Regions, the Northern Region is publishing this notice of availability and collecting comments. Following review of comments, the final management guidelines will be issued in the *Federal Register*.

DATES: Comments on the management guidelines must be received in writing by September 10, 1990.

ADDRESSES: Submit written comments and suggestions on the management guidelines to John Hughes, Deputy Regional Forester, Northern Region, U.S. Forest Service, P.O. Box 7669, Missoula, MT 59807.

FOR FURTHER INFORMATION CONTACT: Direct inquiries or requests for copies of the draft management guidelines to Kent Nelson, Northern Region, (406) 329-3221; Harv Forsgren, Intermountain Region, (801) 625-5755; or Rich Reeves, Northwest Region, (503) 326-3589.

SUPPLEMENTARY INFORMATION: The Columbia River flows through the states of Washington, Oregon and Idaho, through three Forest Service regions, and through 16 national forests. The Forest Service manages a third of the land in the Columbia River Basin, including about 15,000 miles of anadromous fish habitat which is more than 50% of the remaining suitable habitat in the basin. Because of this, management of anadromous fish habitat has always been an important activity the Forest Service has included in its multi-resource program. Habitat management has been addressed in Forest Plans and will continue to be addressed during implementation of these Plans within the context of multiple-use goals and objectives. The significance of this resource, internal reviews, and forest plan appeals indicate a need to look closely at management direction in the areas of setting objectives and assessing management effects as related to the planning of other agencies in the Columbia River Basin.

The Forest Service is adopting management guidelines recognizing they have a vital role in the restoration of wild and naturally reproducing stocks of anadromous fish in the Columbia River Basin. The three Regions intend to support and participate in the achievement of basin wide anadromous fish restoration goals and will adopt consistent approaches to manage the anadromous fish habitat on National Forest lands throughout the Columbia River Basin.

The mechanism to achieve this consistency is through common management guidelines to be issued as a supplement to the Wildlife and Fisheries Program Management Handbook, FSH 2609.13. Briefly, the handbook will provide guidance for Forest Service employees on how to:

1. Establish anadromous fish production capability objectives by forest watershed.
2. Explicitly describe the physical and biological characteristics of riparian and aquatic ecosystems (i.e. "Desired future conditions") necessary to meet those production capability objectives.
3. Identify habitat inventory requirements and procedural approaches.

4. Develop and implement a monitoring strategy for anadromous fish habitats.

5. Define and implement cumulative effects assessment procedures.

6. Identify and address information and research needs.

7. Implement the management guidelines relative to forest land management plans.

8. Develop or revise MOU's with anadromous fish/habitat management entities.

9. Coordinate with related anadromous fish/habitat management programs/activities.

10. Establish an oversight group to facilitate technical development and implementation of the management guidelines.

The management guidelines are intended to be dynamic and will be reviewed annually and amended as necessary.

Dated: August 3, 1990.

John M. Hughes,
Deputy Regional Forester.

[FR Doc. 90-18786 Filed 8-9-90; 8:45 am]

BILLING CODE 3410-11-M

Brighton Ski Resort Master Plan, Wasatch-Cache and Uinta National Forests, Salt Lake County and Wasatch County, UT

AGENCY: Forest Service, USDA.

ACTION: Notice of intent to prepare environmental impact statement.

SUMMARY: The Forest Service will prepare an Environmental Impact Statement on the Brighton Ski Resort (Boyne USA) Master Plan for future ski area developments.

DATES: Comments concerning the scope of the analysis should be received in writing by October 1, 1990.

ADDRESSES: Send written comments to Michael Sieg, District Ranger, Salt Lake Ranger District, Wasatch-Cache National Forest, 6944 South 3000 East, Salt Lake City, Utah 84121.

FOR FURTHER INFORMATION CONTACT:

Questions about the proposed action and environmental impact statement should be directed to John Hoagland, Winter Sports Forester, Salt Lake Ranger District, (801) 524-5042.

SUPPLEMENTARY INFORMATION: Brighton Ski Resort-Boyne USA have prepared a

master plan outlining short term and long term development goals for Brighton Ski Area. The intent of the plan is to expand winter and summer recreational use, to modernize and/or replace existing base facilities, and to increase Brighton Ski Area's competitive position for winter use through the addition of more advanced skiing terrain. The majority of the proposal is located on land within the Wasatch-Cache National Forest although a small portion is within the Uinta National Forest. The Wasatch-Cache is taking the lead responsibility in the analysis while cooperating with the Uinta National Forest.

The scoping process will include mailing a scoping letter to interested individuals. Two public meetings will be held in August and September, one in Wasatch County and one in Salt Lake County. Other meetings may be scheduled. Preliminary issues include: watershed protection and water quality; parking, traffic and transportation; socioeconomic/cultural; recreation; visual quality; vegetation and wildlife; public safety and consistency with existing plans, and state and local authorities. Any additional issues, suggestions and comments should be sent in writing to the address given above.

Susan Giannettino, Forest Supervisor, Wasatch-Cache National Forest is the responsible official for any decisions relating to the Wasatch-Cache National Forest while Don Nebeker, Forest Supervisor, Uinta National Forest is the responsible official for any decisions relating to the Uinta National Forest.

Tentative dates for the filing of the Draft EIS and Final EIS will be January 1991 and May 1991 respectively.

The comment period on the draft environmental impact statement will be 45 days from the date the Environmental Protection Agency's notice of availability appears in the Federal Register. It is very important that those interested in this proposed action participate at that time. To be the most helpful, comments on the draft environmental impact statement should be as specific as possible and may address the adequacy of the statement or the merits of the alternatives discussed (see The Council on Environmental Quality Regulations for implementing the procedural provisions of the National Environmental Policy Act at 40 CFR 1503.3).

In addition, Federal court decisions have established that reviewers of draft environmental impact statements must structure their participation in the

environmental review of the proposal so that it is meaningful and alerts an agency to the reviewers' position and contentions. *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 533 (1978). Environmental objections that could have been raised at the draft stage may be waived if not raised until after completion of the final environmental impact statement. *City of Angoon v. Hodel*, (9th Circuit, 1986) and *Wisconsin Heritages, Inc. v. Harris*, 490 F. Supp. 1334, 1338 (E.D. Wis. 1980). The reason for this is to ensure that substantive comments and objections are made available to the Forest Service at a time when it can meaningfully consider them and respond to them in the final.

Dated: August 2, 1990.

Susan Giannettino,
Forest Supervisor.

[FR Doc. 90-18746 Filed 8-9-90; 8:45 am]

BILLING CODE 3410-11-M

COMMISSION ON CIVIL RIGHTS

Alaska Advisory Committee; Agenda and Public Meeting

Notice is hereby given, pursuant to the provisions of the Rules and Regulations of the U.S. Commission on Civil Rights, that the Alaska Advisory Committee to the Commission will convene at 1 p.m. and adjourn at 4 p.m. on Wednesday, September 19, 1990, at the Anchorage Hilton, 500 West Third Avenue, Anchorage, Alaska 99507. The purpose of the meeting is to discuss civil rights issues in Alaska and plan future project activities.

Persons desiring additional information, or planning a presentation to the Committee, should contact Committee Chairperson, Rosalee Walker or Philip Montez, Director of the Western Regional Division (213) 894-3437 (TTD 213/894-0508). Hearing impaired persons who will attend the meeting and require the services of a sign language interpreter, should contact the Regional Division at least five (5) working days before the scheduled date of the meeting.

The meeting will be conducted pursuant to the provisions of the rules and regulations of the Commission.

Dated at Washington, DC, August 3, 1990.

Wilfredo J. Gonzalez,
Staff Director.

[FR Doc. 90-18787 Filed 8-9-90; 8:45 am]

BILLING CODE 6335-01-M

DEPARTMENT OF COMMERCE

Bureau of Export Administration

[Docket No. 900661-0200]

Foreign Availability Determination; Dynamic Random Access Memories (DRAMs)

AGENCY: Office of Foreign Availability, Bureau of Export Administration, Commerce.

ACTION: Notice of positive determination.

SUMMARY: Under the authority of the Export Administration Act of 1979, as amended (EAA), the Department of Commerce has determined that foreign availability of certain Dynamic Random Access Memories (DRAMs), controlled under ECCN 1564A(d) of the Commodity Control List (CCL) (15 CFR 799.1, Supp. 1), exists to controlled countries. The Commerce Department has initiated action to amend the CCL and to submit the determination for multilateral review.

FOR FURTHER INFORMATION CONTACT: Anatoli Welihozkiy, Acting Director, Office of Foreign Availability, Room SB-097, Department of Commerce, Washington, DC 20230; Telephone: (202) 377-8074.

SUPPLEMENTARY INFORMATION:

Background

Sections 5 (f) and (h) of the EAA require the Department of Commerce to review claims of foreign availability of items controlled for national security purposes. Part 791 of the Export Administration Regulations (EAR) (15 CFR 730 *et seq.*) implements these sections and establishes foreign availability procedures and criteria. The Secretary of Commerce or his designee determines whether foreign availability exists within the meaning of the EAA.

With limited exceptions, the Department of Commerce may not maintain national security controls on exports of an item to affected countries if the Secretary or his designee determines that items of comparable quality are available in fact to such countries from a foreign source in quantities sufficient to render the controls ineffective.

On March 5, 1990, OFA initiated a foreign availability assessment of DRAMS to controlled countries. These items are controlled under ECCN 1564A(d) of the CCL. The Department published a notice of the initiation of this assessment in the Federal Register (55 FR 28260).

OFA provided its assessment and recommendations to the Deputy Under Secretary for Export Administration. The Deputy Under Secretary has considered the assessment and other relevant information and has determined that foreign availability to controlled countries exists within the meaning of section 5 of the EAA for DRAMs meeting all of the following parameter constraints.

(A) Storage capacity up to and including 1 megabit,

(B) Read Access Time not less than 60 nanoseconds,

(C) Operating temperatures not less than -20°C nor greater than $+75^{\circ}\text{C}$.

All interested government agencies, including the Departments of State and Defense, were provided an opportunity to review and comment on the assessment and determination.

The Department has initiated action to submit this determination for multilateral review in accordance with the agreement of the Coordinating Committee for Multilateral Export Controls (COCOM). Within four months beginning on the date of the publication of this notice, the Department will take appropriate action under section 5(f)(3)(B) of the EAA. The Department intends to amend the EAR by removing national security controls from exports of these items to noncontrolled countries as soon as possible. Until such time, current export controls will remain in effect.

If OFA receives new evidence concerning this foreign availability determination, OFA may reevaluate its assessment. Inquiries concerning the scope of this assessment should be sent to the Director of the Office of Foreign Availability at the above address.

Dated: August 6, 1990.

Joan McEntee,

Deputy Under Secretary for Bureau of Export Administration.

[FR Doc. 90-18776 Filed 8-9-90; 8:45 am]

BILLING CODE 3510-DT-M

International Trade Administration

[A-428-602]

Brass Sheet and Strip From West Germany; Negative Preliminary Determination of Circumvention of Antidumping Duty Order

AGENCY: International Trade Administration/Import Administration, Commerce.

ACTION: Notice of negative preliminary determination of circumvention of the antidumping duty order.

SUMMARY: On June 30, 1989, the Department of Commerce began an inquiry into the possible circumvention of the antidumping duty order on brass sheet and strip from West Germany. The anti-circumvention inquiry covered one manufacturer of this product, Wieland-Werke AG (Wieland) and the period January, 1986 through January, 1989.

We preliminarily determine that Wieland is not circumventing the antidumping duty order on brass sheet and strip from West Germany. Interested parties are invited to comment on this preliminary determination.

EFFECTIVE DATE: August 10, 1990.

FOR FURTHER INFORMATION CONTACT:

Marquita Steadman or Richard Rimlinger, Office of Compliance, International Trade Administration, U.S. Department of Commerce, Washington, DC 20230; telephone: (202) 377-1131.

SUPPLEMENTARY INFORMATION:

Background

In a letter dated January 11, 1989, petitioners stated that they had recently become aware of a possible effort by at least one West German producer, Wieland, to circumvent the antidumping duty order on West German brass sheet and strip. The brass sheet and strip under order is the Copper Development Association (C.D.A.) 200 series. This series is comprised of alloys that are predominantly of copper and zinc. Petitioners contend that Wieland is now promoting another copper-zinc alloy known as manganese brass, which is classified as C.D.A. 667 brass and is chemically distinguishable from C.D.A. 200-series brass by the presence of a small amount of iron and manganese.

Because of the nature of this allegation, the Department initially determined that a scope review was necessary and initiated a scope clarification procedure. In letters dated February 2, 1989, the Department solicited comments from interested parties on petitioners' January 11, 1989 allegation. See "Introduction" section of this notice concerning the nature of the scope inquiry.

Respondents submitted comments to the Department on February 27, 1989. Petitioners submitted rebuttal comments on March 13, 1989.

We decided that more information was necessary to fully evaluate petitioners' circumvention allegation. We sent a questionnaire to Wieland on May 26, 1989. We received Wieland's response on June 21, 1989. On June 30, 1989, we initiated a circumvention inquiry and sent a supplemental questionnaire to Wieland. On July 11,

1989, we received a response to that questionnaire.

Scope of the Antidumping Duty Order

Imports covered by the antidumping order are shipments of brass sheet and strip, other than leaded brass and tin brass sheet and strip, from West Germany. The chemical composition of the products covered is currently defined in the C.D.A. 200 series of the Unified Numbering System (U.N.S.) C20000 series. Products whose chemical composition are defined by other C.D.A. or U.N.S. series are not covered by this order. During the relevant period of inquiry, such merchandise was classifiable under item numbers 612.3960, 621.3982 and 612.3986 of the Tariff Schedules of the United States Annotated (TSUSA). This merchandise is currently classifiable under Harmonized Tariff Schedules (HTS) item numbers 7409.21.00 and 7409.29.00. TSUSA and HTS item numbers are provided for convenience and for Customs purposes. The written descriptions remain dispositive.

Introduction

Our primary bases for determining whether a product is covered under the scope of an antidumping duty order are the descriptions of the product contained in the petition, the International Trade Commission's (ITC) determinations, and the Commerce Department's determinations. When we cannot make a determination based on these documents, we examine additional criteria, including the physical characteristics of the merchandise, the uses for which the merchandise is imported, the expectations of the ultimate purchasers, and the channels of trade in which the merchandise moves.

Had this case not involved allegations of minor alterations pursuant to section 781(c) of the Tariff Act of 1930, as amended, 19 U.S.C. section 1677j(c) ("the Tariff Act"), it would have been unnecessary to address the four additional criteria because the descriptions found in the petition and the Department's and ITC's determinations are clear in defining the merchandise.

The petition, filed on March 10, 1986, summarized the requested scope of the investigation as follows:

In short, it is the C.D.A. 200 or C20000 series of brasses that is the class or kind of merchandise that is being imported into the United States and is the subject of the petition.

The ITC final determination (USITC Pub. No. 1951, February, 1987) stated the following:

The chemical compositions of the products under investigation are currently defined in the Copper Development Association (C.D.A.) 200 series or Unified Numbering System (U.N.S.) C20000 series. Products whose chemical compositions are defined by other C.D.A. or U.N.S. series are not covered by these investigations.

In the final antidumping duty order (52 FR 6997, March 6, 1987), the Department defined the chemical composition of the merchandise subject to the order as follows:

The chemical composition of the products under investigation is currently defined in the Copper Development Association (C.D.A.) 200 series or the Unified Numbering System (U.N.S.) C20000 series. Products whose chemical composition is covered by other C.D.A. or U.N.S. series are not covered by this investigation.

It is the Department's position that the petition, the final Commerce and ITC determinations, and the antidumping duty order expressly provide that brass sheet and strip which are not of the 200 series are not covered by the order. Because manganese brass is classified as 667 series brass, it is not within the scope of the order.

Nature of the Circumvention Inquiry

Section 781(c) of the Tariff Act provides that the class or kind of merchandise subject to an existing antidumping or countervailing duty order shall include articles altered in form or appearance in minor respects, whether or not included in the same tariff classification, unless the Department determines that it is unnecessary to consider the altered merchandise within the scope of the order.

The statute is silent as to what factors to consider in determining whether alterations are minor. However, our review of the legislative history of this provision indicates that there are certain factors which should be considered before rendering an anti-circumvention determination. The report of the Senate Finance Committee states:

In applying this provision, the Commerce Department should apply practical measurements regarding minor alterations, so that circumvention can be dealt with effectively, even where such alterations to an article technically transform it into a differently designated article. The Commerce Department should consider such criteria as the overall characteristics of the merchandise, the expectations of ultimate users, the use of the merchandise, the channel of marketing and the cost of any modification relative to the total value of the imported product. S. REP. NO. 71, 100th Cong., 1st Sess. 100 (1987).

The above-quoted portion of the legislative history suggests that

Congress intended the Department to make anti-circumvention determinations on a case-by-case basis. Therefore, we have considered the above-enumerated factors in evaluating petitioners' circumvention allegation.

Circumvention Arguments

In their January 11, 1989 letter, petitioners argued that Wieland has been offering and selling an alloy to U.S. customers that has been manipulated to be slightly different from the brass explicitly under order. The brass sheet and strip under order is of the 200 series. This series is comprised of alloys that are predominantly of copper and zinc. The alloy that Wieland is now promoting, on the other hand, is another copper-zinc alloy known as 667 series brass that is chemically distinguishable from the 200 series by the presence of a small percentage of additional iron and manganese. Petitioners claim that "these alterations are so slight as to be almost infinitesimal." Petitioners contend that in some cases Wieland is using 667 series as a substitute for C.D.A. 260 brass ("cartridge brass"), which is the principal alloy of the 200 series. Petitioners further state that:

To petitioners' knowledge, neither Wieland nor any other West German supplier has ever exported manganese brass to the United States prior to the 1987 antidumping duty order. Had there been such imports, petitioners would have specifically included such brass within the bounds of the petition.

Petitioners contend in a letter dated March 13, 1989 that, under these circumstances, if the petition had included manganese brass to prevent potential circumvention, the Department probably would not have investigated this product because West German suppliers were not exporting manganese brass at that time.

Petitioners further contend in their letter dated January 11, 1989 that there is no legitimate commercial purpose served by a shift from cartridge brass to 667 series brass. They claim that the 667 series brass is more difficult to produce and that it has no inherent qualities that provide an advantage in its application over cartridge brass. They allege that the sole reason Wieland exports 667 series brass to the United States is to avoid antidumping duties on brass sheet and strip. They argue that importers of 667 series brass from Wieland have no incentive to import this merchandise other than to evade antidumping duties.

Finally, petitioners allege in a letter dated March 13, 1989 that Wieland's exports of 667 series brass to the United States have been significant.

In a letter dated February 27, 1989, Wieland argues that 667 series brass is

clearly outside the scope of the existing order. Wieland notes that, at petitioners' urging, the original LTFV and injury investigations were strictly limited to 200 series brass. It contends that any attempt to expand the scope to include this merchandise would both exceed the Department's statutory authority and be fundamentally unfair.

Respondent claims that petitioners' observation that 667 series brass contains only a small percentage of additional iron and manganese is misleading. Wieland asserts that anyone in the industry can attest that:

Many of the different C.D.A. alloys contain proportionately small percentages of alloying metals. For example, C.D.A. 400 tinned brasses (which petitioners specifically raised in the original petition as an example of non-200 series brass that should be excluded from the investigation) can contain as little as one-half of one percent added tin—less than the minimum manganese required for C.D.A. 667 manganese brass.

Respondent contends, in its June 21, 1989 questionnaire response, that there are important differences in the physical properties of cartridge brass and 667 series brass, i.e., melting points, thermal conductivity, electrical resistivity, electrical conductivity, and the modulus of rigidity. Wieland also contends that cartridge brass and 667 series brass have different fabrication properties. For example, 667 series brass has a better capacity for being hot formed. The hot working and annealing temperatures of the two types of brass also differ. Respondent claims that 667 series brass has far superior qualities for being joined by resistance welding. Wieland argues that the standards handbook of the Copper Development Association ("Handbook") confirms that 667 series brass is superior to 200 series brass for spot and beam welding; in the area of seam welding, C.D.A. 667 brass is excellent for this use, whereas cartridge brass is not recommended.

Again, citing the Handbook, Wieland further argues that, unlike 200 series brass, 667 series brass is particularly useful for resistance weldable brass products. According to the Handbook, this is the application where 667 series brass is most typically used as a substitute for other brasses. If the finished product is being welded, the substitution of manganese brass confers significant advantages. Respondent admits that for these applications, although 667 series brass is preferable, 200 series brass can also be used in some cases. On the other hand, 667 series brass cannot be used wherever electrical conductivity is required.

Wieland states that the most commonly used form and tempers of 667 series brass are far more limited than those for cartridge brass. Wieland claims this is true for annealed tempers, rolled or drawn tempers, and hot finished tempers. Wieland cites to the list of product strengths in the Handbook as authority for the point that there are also differences in the mechanical properties between cartridge brass and 667 series brass.

Wieland states that it decided to test market 667 series brass in the second quarter of 1987. Wieland asserts that it sold very small quantities of 667 series brass during the test marketing period. Wieland further explains that its test marketing project was discontinued in November, 1988 and exports of 667 series brass to the United States after that date were to fill orders from the earlier test marketing period. Finally, Wieland states that it has no further plans to sell the merchandise.

Wieland asserts that since 667 series brass was only test marketed, it has not determined the precise cost differentials between the two distinct types of brass. As a general matter, however, Wieland notes that the welding properties of 667 series brass permit the production of larger coil weights, which, in turn, results in production savings. At the same time, the alloy components and the cost of casting are somewhat higher for 667 series brass. As a result, Wieland estimates that the total manufactured costs for 667 series and 200 series brass are about the same.

Wieland contends, in its July 11, 1989 supplemental questionnaire response, that its customers did not modify the C.D.A. 667 alloy into a C.D.A. 200-series application, although such a modification is possible. Wieland contends that the alloy can only be modified by remelting, during which the chemical composition of the alloy can be changed.

Wieland states that the channel of marketing for 667 series material was the same as for all of Wieland's products sold in the United States. Wieland sells its products through a related organization in the United States, Wieland-America, Inc.

With respect to the actual use of 667 series brass by its customers, Wieland claims, in its August 15, 1989 submission, that it has not control over how its customers use its finished intermediate products since they can be used for various purposes or resold.

Department's Preliminary Analysis

We agree with Wieland that 667 series brass is not a minor alternation of brass sheet and strip of the 200 series.

We find that 667 series brass is, instead, a distinct product that existed at the time the petition was filed and was recognized in the industry as a separate series of brass. Accordingly, we preliminarily determine that West German shipments of 667 series brass do not constitute circumvention of this order.

In reaching this preliminary position, we have taken into account the following criteria specified in the legislative history of section 781(c) of the Tariff Act (see "Nature of the Circumvention Inquiry" section of this notice):

[The] overall characteristics of the merchandise, the expectations of ultimate users, the use of the merchandise, the channel of marketing and the cost of any modification relative to the total value of the imported product. S. Rep. No. 71, 100th Cong., 1st Sess. 100 (1987).

In addition to the above, we also took into account: 1) The circumstances under which manganese brass entered the United States, 2) the timing of these entries during the circumvention review period, and 3) the total quantity of manganese brass entered during this period.

A. Overall Characteristics of the Merchandise

We believe that the overall characteristics of 667 series brass and 200 series brass are different. The C.D.A. standards were developed by manufacturers and consumers over an extended period of time to represent alloys that are suitable for specific applications. Different chemical combinations are required to produce particular alloys. The alloy is an essential characteristic of the product. While alloys within the same general series, *i.e.*, within the C20000 series, have only minor differences in chemistry and are sufficiently similar to allow for product interchangeability, the same cannot be said for alloys outside of a given series. As noted by respondents, a small amount of alloying tin results in tinned brass, a product with characteristics different from the cartridge brass under investigation. Once the product is manufactured, its alloy cannot be altered without remelting and re-manufacturing the product. Thus, differences in alloy content are significant between series, and changes in alloy content involve more than a minor modification.

With respect to petitioners' allegation that Wieland can offer no legitimate commercial advantage of 667 series brass over 200 series brass, we disagree. A specialist from the C.D.A. and the Handbook confirmed Wieland's

contention that 667 series brass is preferable to 200 series brass for purposes of spot, seam, and butt resistance welding. In addition, 667 series brass has a better capacity for being hot formed.

B. Expectations of the Ultimate Users

Consumers of 667 series brass and cartridge brass expect to use these products for different purposes (See Section C below).

C. Use of the Merchandise

C.D.A. 667 series brass is typically used in manufacturing resistance weldable brass products. Cartridge brass, on the other hand, usually is used in the manufacture of the following products:

Category of use	Product
Architectural.....	Grillwork.
Automotive.....	Radiator and heater cored and tanks.
Electrical.....	Flashlight shells, lamp fixtures, reflectors, screw shells, socket shells.
Hardware.....	Bead chain, chain, eyelets, fasteners, grommets, finish hardware articles (bings kick plates, locks, push plates, etc.) stencils.
Industrial.....	Pump and power cylinders and liners.
Munitions.....	Ammunition components.
Plumbing.....	Plumbing accessories, plumbing brass goods.
Wire.....	Fasteners, pins, rivets, screws, springs.

We consulted a specialist from the C.D.A. concerning the substitution of 667 series brass for cartridges brass. We were informed that it is very unlikely that a consumer would use 667 series brass as a substitute for cartridge brass. Cartridge brass, which is primarily used for bullet shells, contains the highest ductility of all of the different types of brass. The use of 667 series brass in this application may damage the pipe, *i.e.*, lead to cracking. In addition, the presence of manganese would reduce the normal conductivity of cartridge brass from 28% to 17%, which is considered very substantial. In summary, we believe that it is unlikely that 667 series brass was substituted for cartridge brass because, as a practical matter, this would result in an inferior product.

C. Channels of Marketing

Wieland does not have any current channel of marketing 667 series brass in the United States. However, Wieland

explained that during its test marketing period, it sold 667 series brass through the same channel of marketing as it sells its other products to the United States, including 200 series brass. We recognize that the channels of marketing of 667 series brass and 200 series brass were the same during the test marketing period of 667 series brass. However, we do not believe that this is conclusive evidence that 667 series brass was being used to circumvent the order.

D. The Cost of Any Modification Relative to the Total Value of the Imported Product

Because there is no evidence to suggest that Wieland is "modifying" its 200 series brass, but is instead manufacturing and exporting a different type of brass, i.e., 667 series brass, there is no issue in this case as to the cost of modification relative to the total value of the imported product.

E. Circumstances Under Which Manganese Brass Entered the United States

Wieland decided to test market C.D.A. 667 manganese brass in the second quarter of 1987. Wieland sold very small quantities of manganese brass during the test marketing period. Wieland further explains that its test marketing project was discontinued in November, 1988 and exports of manganese brass to the United States after that date were to fill orders from the earlier test marketing period. Finally, Wieland states that it has no further plans to sell the merchandise. We therefore conclude that Wieland exports of 667 series manganese brass to the United States were for test marketing purposes and not to circumvent the antidumping duty order on brass sheet and strip.

F. Timing and Volume of Manganese Brass Exported to the United States

We note that even though 667 series brass existed prior to the petition being filed, petitioners never mentioned in their petition that they considered 667 series brass to be a possible substitute for 200 series brass products. Also, although Wieland actually started to export 667 series brass in the second quarter of 1987, i.e., after the petition was filed, the quantities shipped were moderate in comparison to the total brass sheet and strip exports to the United States during this time. In addition, our review of Wieland's exports of 667 series and 200 series brass during the relevant time period indicates there is not a clear correlation between the respective quantities sold of the two types of brass; i.e., there was

neither a rapid decline in sales of 200 series brass, nor a rapid increase in sales of 667 series brass. Thus, it does not appear that Wieland's customers were altering their purchasing behavior. This point, together with the lack of any evidence on the record indicating that 667 series brass was being substituted for 200 series brass applications, leads us to preliminarily accept Wieland's claim that its exportation of 667 series was for test marketing purposes.

Negative Preliminary Determination of Circumvention Inquiry

We recognize that the channels of marketing and the cost of production of 667 series brass and 200 series brass were essentially the same. However, the bulk of the evidence on the record establishes that 667 series brass was not a minor alteration of the 200 series brass. Specifically, this evidence consists of the information concerning the differing properties and uses of 667 and 200 series brass; our preliminary determination that 667 series brass was being exported for test marketing purposes; and most importantly, the fact that 667 series brass existed at the time the petition was filed, and was recognized in the industry as a separate series of brass.

Therefore, we preliminarily determine that C.D.A. 667 brass does not represent a minor alteration of the 200 series brass sheet and strip products subject to the scope of the antidumping duty order within the meaning of section 781(c)(2) of the Tariff Act. We preliminarily determine that no circumvention of the antidumping duty order is occurring.

Interested parties may request disclosure within 5 days of the date of publication of this notice and may request a hearing within 10 days of publication. Any hearing, if requested, will be held 44 days after the date of publication, or the first workday thereafter. Case briefs and/or written comments from interested parties may be submitted not later than 30 days after the date of publication. Rebuttal briefs and rebuttals to written comments, limited to issues raised in those comments, may be filed no later than 37 days after the date of publication. In accordance with § 353.29(j)(2) of the Commerce Department's regulations published in the *Federal Register* on March 9, 1990 (55 FR 9046) (to be codified at 19 CFR 353.29 (j)(2)), we will instruct Customs that it should no longer suspend liquidation on entries of C.D.A. 667 series brass sheet and strip.

The Department will publish the final determination of the anti-circumvention inquiry, including the results of its

analysis of any written or oral comments, within 90 days of publication of this notice. This negative determination of circumvention is in accordance with section 781(c)(2) of the Tariff Act.

Dated: August 6, 1990.

Eric I. Garfinkel,

Assistant Secretary for Import Administration.

[FR Doc. 90-18760 Filed 8-9-90; 8:45 am]

BILLING CODE 3510-DS-M

[A-122-050]

Racing Plates From Canada; Determination Not To Revoke Antidumping Finding

AGENCY: International Trade Administration/Import Administration, Department of Commerce.

ACTION: Notice of Determination Not To Revoke Antidumping Finding.

SUMMARY: The Department of Commerce is notifying the public of its determination not to revoke the antidumping finding on racing plates from Canada.

EFFECTIVE DATE: August 10, 1990.

FOR FURTHER INFORMATION CONTACT: Sheila Forbes or Robert Marenick, Office of Antidumping Compliance, International Trade Administration, U.S. Department of Commerce, Washington, DC 20230; telephone: (202) 377-5255.

SUPPLEMENTARY INFORMATION: On February 1, 1990, the Department of Commerce (the Department) published in the *Federal Register* (55 FR 3434) its intent to revoke the antidumping finding on racing plates from Canada (39 FR 7579, February 27, 1974). The Department may revoke an order if the Secretary concludes that the order is no longer of interest to interested parties. We had not received a request for an administrative review of the finding for the last four consecutive annual anniversary months and therefore published a notice of intent to revoke pursuant to § 353.25(d)(4) of the Department's regulations (19 CFR 353.25(d)(4)(1990)).

On February 21, and 22, 1990, Thoro'Bred Racing Plate Co., the original petitioner in this case, and The Victory Racing Plate Company, a U.S. producer of racing plates, objected to our intent to revoke the finding. Therefore, we no longer intend to revoke the finding.

Dated: August 2, 1990.

Holly A. Kuga,

Acting Deputy Assistant Secretary for Compliance.

[FR Doc. 90-18761 Filed 8-9-90; 8:45 am]

BILLING CODE 3510-DS-M

[A-413-077, A-427-078, A-428-082]

Sugar From Belgium, France, and West Germany; Determination Not To Revoke Antidumping Findings

AGENCY: International Trade Administration/Import Administration, Commerce.

ACTION: Notice of Determination Not to Revoke Antidumping Findings.

SUMMARY: The Department of Commerce is notifying the public of its determination not to revoke the antidumping findings on Sugar from Belgium, France, and West Germany.

EFFECTIVE DATE: August 10, 1990.

FOR FURTHER INFORMATION CONTACT:

Edward Haley or Robert Marenick, Office of Antidumping Compliance, International Trade Administration, U.S. Department of Commerce, Washington, DC 20230; telephone: (202) 377-5255.

SUPPLEMENTARY INFORMATION: On June 1, 1990, the Department of Commerce (the Department) published in the *Federal Register* (55 FR 22365) its intent to revoke the antidumping findings on sugar from Belgium, France, and West Germany (44 FR 33878, June 13, 1979).

The Department may revoke a finding if the Secretary concludes that the finding is no longer of interest to interested parties. We had not received a request for an administrative review of the findings for the last four consecutive annual anniversary months and therefore published a notice of intent to revoke pursuant to 19 CFR 353.25(d)(4).

On June 29, 1990, in separate letters, the Florida Sugar Marketing Terminal Association, the petitioner, the U.S. Beet Sugar Association and the U.S. Cane Sugar Refiners Association, interested parties, objected to our intent to revoke the findings. Therefore, we no longer intend to revoke the findings.

Dated: August 2, 1990.

Holly A. Kuga,

Acting Deputy Assistant Secretary for Compliance.

[FR Doc. 90-18762 Filed 8-9-90; 8:45 am]

BILLING CODE 3510-DS-M

[A-580-806]

Final Determination of Sales at Less Than Fair Value: Sweaters Wholly or in Chief Weight of Man-Made Fiber from the Republic of Korea

AGENCY: Import Administration, International Trade Administration, Commerce.

ACTION: Notice.

SUMMARY: We determine that sweaters wholly in in chief weight of man-made fiber (MMF sweaters) from the Republic of Korea (Korea) are being, or are likely to be, sold in the United States at less than fair value. We have notified the U.S. International Trade Commission (ITC) of our determination and have directed the U.S. Customs Service to continue to suspend liquidation of all entries of MMF sweaters from Korea, as described in the "Suspension of Liquidation" section of this notice. The ITC will determine within 45 days of the publication of this notice, whether these imports materially injure, or threaten material injury to, a U.S. industry.

EFFECTIVE DATE: August 10, 1990.

FOR FURTHER INFORMATION CONTACT:

Mary S. Clapp (Hanil Synthetic Fiber Ind. Co. Ltd. only) or James Terpstra (all other companies), Office of Antidumping Investigations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230; telephone: (202) 377-3965 or 377-8830, respectively.

SUPPLEMENTARY INFORMATION:

Final Determination

We determine that MMF sweaters from Korea are being, or are likely to be, sold in the United States at less than fair value, as provided in section 735(a) of the Tariff Act of 1930, as amended (19 U.S.C. 1673d(a)) (the Act). The estimated weighted-average margins are shown in the "Suspension of Liquidation" section of this notice.

Case History

Since the notice of preliminary determination (55 FR 17788, April 27, 1990), the following events have occurred. All respondents requested that the final determination in this investigation be postponed until not later than four weeks from its originally scheduled date, pursuant to section 735(a)(2) of the Act. On May 24, 1990, and June 21, 1990, we published notices postponing our final determination until not later than August 2, 1990, and announcing the public hearing (55 FR 21419 and 55 FR 25352, respectively).

Verification of the questionnaire responses was conducted in Korea and the United States, as appropriate, during May and June 1990.

A public hearing was held on July 12, 1990. Petitioner and respondents filed case and rebuttal briefs on July 6, 1990, and July 10, 1990, respectively.

On July 27, 1990, an interested party asked for a clarification as to whether MMF sweaters assembled in the Commonwealth of Northern Mariana Islands from knit-to-shape component parts knit in and imported from Korea are excluded from the scope of the investigation. In addition, on July 25, 1990, counsel for the Korean respondents filed comments on the Department's scope clarification published in the companion Hong Kong investigation dealing with length and lining. For purposes of this determination, the scope of this investigation is identical to that in the *Final Determination of Sales at Less Than Fair Value: Sweaters Wholly or in Chief Weight of Man-Made Fiber from Hong Kong* (55 FR 30733, July 27, 1990). We are considering comments received on these issues. Any further clarifications to the scope of this investigation will be made in the antidumping duty order, if one is issued.

Scope of Investigation

The United States has developed a system of tariff classification based on the international harmonized system of customs nomenclature. On January 1, 1989, the United States fully converted to the *Harmonized Tariff Schedule* (HTS) as provided for in section 1201 *et seq.* of the Omnibus Trade and Competitiveness Act of 1988. All merchandise entered or withdrawn from warehouse for consumption on or after this date is being classified solely according to the appropriate HTS item numbers.

The products covered by this investigation include sweaters wholly or in chief weight of man-made fiber. For purposes of this investigation, sweaters of man-made fiber are defined as garments for outerwear that are knit or crocheted, in a variety of forms including jacket, vest, cardigan with button or zipper front, or pullover, usually having ribbing around the neck, bottom and cuffs on the sleeves (if any), encompassing garments of various lengths, wholly or in chief weight of man-made fiber. The term "in chief weight of man-made fiber" includes sweaters where the man-made fiber material predominates by weight over each other single textile material. This excludes sweaters 23 percent or more by

weight of wool. It includes men's, women's boys' or girls' sweaters, as defined above, but does not include sweaters for infants 24 months of age or younger. It includes all sweaters as defined above, regardless of the number of stitches per centimeter, provided that, with regard to sweaters having more than nine stitches per two linear centimeters horizontally, it includes only those with a knit-on rib at the bottom.

In our preliminary determination, we clarified the scope of this investigation by deleting the phrase "but most typically ending at the waist." This has raised a number of questions. For further clarification, a product or garment will not be considered a sweater nor included in the scope of this investigation if it extends to mid-calf or below and is lined.

This merchandise is currently classifiable under HTS item numbers 6110.30.30.10, 6110.30.30.15, 6110.30.30.20, 6110.30.30.25, 6103.23.00.70, 6103.29.10.40, 6103.29.20.62, 6104.23.00.40, 6104.29.10.60, 6104.29.20.60, 6110.30.10.10, 6110.30.10.20, 6110.30.20.10 and 6110.30.20.20. This merchandise may also enter under HTS item numbers 6110.30.30.50 and 6110.30.30.55. Specifically excluded from the scope of this investigation are sweaters assembled in Guam that are produced from knit-to-shape component parts knit in and imported from Korea. The HTS item numbers are provided for convenience and Customs purposes. The written description remains dispositive as to the scope of the produce coverage. As noted above, the scope of this investigation remains subject to clarification in view of issues raised too late for a complete airing and thorough consideration before issuance of this determination.

Period of Investigation

The period of investigation (POI) is April 1, 1989, through September 30, 1989.

Such or Similar Comparisons

For all respondent companies, in accordance with section 771(16) of the Act, we established one such or similar category of merchandise, consisting of all MMF sweaters. Product comparisons were made on the basis of the following criteria, which are ranked in the order of importance: (1) Style of sweater; (2) fiber content; (3) yarn weight; (4) yarn gauge; (5) weight per dozen; and (6) type of knit. We used third country sales as the basis for foreign market value (FMV) for all respondents, as described in the "Foreign Market Value" section of this notice.

Where there were no sales of identical merchandise in the third

country markets to compare to sales of merchandise in the United States, sales of the most similar merchandise were compared on the basis of the characteristics described above. In cases where there was equally similar third country merchandise, we calculated weighted-average prices and adjustments for differences in the merchandise for comparison purposes. We limited our comparisons to products sold in the third country market where the reported adjustment for physical differences in merchandise did not exceed 20 percent of the net third country market price of the comparison merchandise because we determined that adjustments of greater magnitude would be unreasonable in this case.

Where we could not find a comparison sweater with a difference in merchandise adjustment of 20 percent or less of the relevant foreign price, we disregarded those U.S. sales transactions from our analysis because the quantity of sweaters involved in these transactions was not significant enough to justify adopting an alternative method for determining FMV (i.e., constructed value (CV)).

We also revised respondents' concordances, where necessary, to account for the exclusion of below-cost sales from our analysis, post-verification corrections to the sales data, and the recalculation of the duty portion of the total variable costs used in the adjustment for physical differences in merchandise. (See *DOC Position to Comment 3* in the "Interested Party Comments" section of this notice.)

Fair Value Comparisons

To determine whether sales of MMF sweaters from Korea to the United States were made at less than fair value, we compared the United States price to the FMV, as specified in the "United States Price" and "Foreign Market Value" sections of this notice.

United States Price

For Chunji Industrial Co., Ltd. (Chunji), Shinwon Tongsang (Shinwon), Young Woo & Co., Ltd. (Young Woo) and Yurim Company, Ltd. (Yurim), we based the United States price on purchase price, in accordance with section 772(b) of the Act, because all reported sales were made directly to unrelated parties prior to importation into the United States.

For Hanil Synthetic Fiber Inc. Co. Ltd. (Hanil), we based United States price on both purchase price and exporter's sales price (ESP), in accordance with sections 772 (b) and (c) of the Act.

A. Chunji

We calculated purchase price based on packed, f.o.b. Korean port prices to unrelated customers in the United States.

Based on our findings at verification, we adjusted Chunji's data for certain minor clerical errors. We recalculated indirect selling expenses. (See *DOC Position to Comment 15* in the "Interested Party Comments" section of this notice.) We made deductions, where appropriate, for foreign brokerage and handling expenses, foreign inland freight, and wharfage fees in accordance with section 772(d)(2) of the Act. Since Chunji failed to report credit expenses for the period between shipment and payment, we calculated credit expenses for this period for sales to both Mexico and the United States. In addition, we made deductions, where appropriate, for discounts. We added duty drawback in accordance with section 772(d)(1)(B) of the Act.

For purposes of the preliminary determination, we excluded sales characterized by Chunji as "resales." Based on our findings at verification, we did not find that these sales were sample sales or sales of defective merchandise; furthermore, we found nothing about the physical condition of the merchandise which would preclude its sale under normal circumstances. Therefore, for purposes of this final determination, we have included these sales in our analysis. Because Chunji did not report charges or adjustments for these sales, and given that the prices charged on these sales were within the range of prices reported for the other sales, we have applied the average margin calculated for Chunji's other sales as best information available.

B. Hanil

We calculated purchase price based on packed, f.o.b. Korean port prices to unrelated customers in the United States.

Based on our findings at verification, we adjusted Hanil's purchase price data for certain minor clerical errors. We made deductions, where appropriate, for foreign brokerage and handling expenses, foreign inland freight, wharfage fees and containerization, in accordance with section 772(d)(2) of the Act. We added duty drawback in accordance with section 772(d)(1)(B) of the Act.

Hanil also reported certain ESP transactions. This merchandise was subsequently resold by Hanil's first unrelated U.S. customer to a retailer. The price reported by Hanil in its sales

listing was the price charged by the first unrelated customer to the retailer. The difference between this price to the retailer and the price agreed to between Hanil and its U.S. customer was reported as a commission. However, since we consider the sale to the original purchaser to be the first sale to an unrelated purchaser in the United States, we have deducted the claimed commission from the reported price as a price adjustment in order to derive the actual price on that sale as best information available.

Where United States price was based on ESP, we calculated ESP based on packed, f.o.b. U.S. warehouse or delivered prices to the first unrelated customer in the United States.

Based on our findings at verification, we adjusted Hanil's ESP data for certain minor clerical errors. We dropped certain misreported sales from our analysis which at verification were found to be sales to Canada. We made deductions, where appropriate, for foreign brokerage and handling expenses, foreign inland freight, wharfage fees, containerization expenses, ocean freight, marine insurance, U.S. import duties, U.S. brokerage fees, and U.S. inland freight, in accordance with section 772(d)(2) of the Act. We made further deductions, where appropriate, for discounts, credit, bank charges, factor charges, labeling charges, warehouse handling charges, the price adjustment, and indirect selling expenses, including "miscellaneous" expenses and inventory carrying costs, in accordance with section 772(e) (1) and (2) of the Act. We added duty drawback in accordance with section 772(d)(1)(B) of the Act.

C. Shinwon

We calculated purchase price based on packed, f.o.b. Korean port prices to unrelated customers in the United States.

Based on our findings at verification, we adjusted Shinwon's data for certain minor clerical errors. We made deductions, where appropriate, for foreign brokerage and handling expenses, foreign inland freight, wharfage fees and containerization expenses, in accordance with section 772(d)(2) of the Act. We added duty drawback in accordance with section 772(d)(1)(b) of the Act.

Shinwon reported an amount for "commission" payments in the U.S. market. However, in addition to actual commissions paid, the reported amount also included certain non-commission payments which we have reclassified as quota payments. These quota payments have been treated as direct selling

expenses not subject to the commission offset. (See DOC Position to Comment 4 in the "Interested Party Comments" section of this notice.) At verification, we noted that for certain transactions the gross unit price reported in Shinwon's sales listing was actually the amount received by the unrelated quota holder, not the actual amount received by Shinwon. Shinwon received only the amount net of quota payment. Accordingly, we recalculated credit and indirect selling expenses, which are based on gross unit price, on the basis of the amount actually received by Shinwon.

D. Young Woo

We calculated purchase price based on packed, f.o.b. Korean port prices to unrelated customers in the United States.

Based on our findings at verification, we adjusted Young Woo's data for certain minor clerical errors. We increased the quantity for one sale to reflect the total quantity of a revised purchase order. We made deductions, where appropriate, for foreign brokerage and handling expenses, foreign inland freight, wharfage fees and containerization expenses, and ocean freight, in accordance with section 772(D)(2) of the Act. Since Young Woo failed to report credit expenses for the period between shipment and payment, we calculated credit expenses for this period for sales to both the United Kingdom and the United States. In addition, we made deductions, where appropriate, for discounts. We added duty drawback in accordance with section 772(d)(1)(B) of the Act.

Young Woo reported an amount for "commission" payments in the U.S. market. However, in addition to actual commissions paid, the reported amount also included certain non-commission payments which we have reclassified as quota payments. These quota payments have been treated as direct selling expenses not subject to the commission offset. (See DOC Position to Comment 4 in the "Interested Party Comments" section of this notice.) At verification, we noted that for certain transactions the gross unit price reported in Young Woo's sales listing was actually that received by the unrelated quota holder, not the actual amount received by Young Woo. Young Woo received only the amount net of quota payment. Accordingly, we recalculated credit and indirect selling expenses, which are based on gross unit price, on the basis of the amount actually received by Young Woo.

For purposes of the preliminary determination, we excluded sales

characterized by Young Woo as "resales." Based on our findings at verification, we did not find that these sales were sample sales or sales of defective merchandise; furthermore, we found nothing about the physical condition of the merchandise which would preclude its sale under normal circumstances. Therefore, for purposes of this final determination, we have included these sales in our analysis. Because Young Woo did not report charges or adjustments for these sales, and given that the prices charged on these sales were generally lower than the prices of the other reported sales, we have applied the highest single margin calculated for Young Woo's other sales as best information available.

We verified that Young Woo's ESP sales constituted a minimal percentage of its sales to the United States. Therefore, we did not include these sales in our calculation of United States price.

E. Yurim

We calculated purchase price based on packed, f.o.b. Korean port prices to unrelated customers in the United States.

Based on our findings at verification, we adjusted Yurim's data for certain minor clerical errors. We made deductions, where appropriate, for foreign brokerage and handling expenses, foreign inland freight, wharfage fees and containerization expenses, in accordance with section 772(d)(2) of the Act. We added duty drawback in accordance with section 772(D)(1)(B) of the Act.

Yurim reported an amount for "commission" payments in the U.S. market. However, this payment consisted solely of certain non-commission payments which we have reclassified as quota payments. These quota payments have been treated as direct selling expenses not subject to the commission offset. (See DOC Position to Comment 4 in the "Interested Party Comments" section of this notice.) At verification, we noted that for certain transactions the gross unit price reported in Yurim's sales listing was actually the amount received by the unrelated quota holder, not the actual amount received by Yurim. Yurim received only the amount net of quota payment. Accordingly, we recalculated credit, which is based on gross unit price, on the basis of the amount actually received by Yurim.

Foreign Market Value

In accordance with section 773(a) of the Act, we calculated FMV based on third country sales.

In order to determine whether there were sufficient sales of MMF sweaters in the home market to serve as the basis for calculating FMV, we compared the volume of home market sales of the such or similar category (*i.e.*, all MMF sweaters) to the aggregate volume of third country sales, in accordance with section 773(a)(1) of the Act. For all respondents, the volume of home market sales was less than five percent of the aggregate volume of third country sales. Therefore, we determined that home market sales did not constitute a viable basis for calculating FMV, in accordance with § 353.48 of the Department's regulations (19 CFR 353.48).

In selecting which third country market to use for comparison purposes, we first determined which third country markets had "adequate" volumes of sales, within the meaning of § 353.49(b)(1). We determined that the volume of sales to a third country market was adequate if the sales of such or similar merchandise exceeded or was equal to five percent of the volume sold to the United States. In selecting which third country market, having an adequate sales volume, was the most appropriate for comparison purposes, we selected the third country market with the largest volume of sales, in accordance with § 353.49(b)(2) of the Department's regulations.

Petitioner subsequently alleged that all five Korean respondents were selling to the selected third country markets at prices below the cost of production (COP). Based on petitioner's allegation, we gathered and verified data on respondents' production costs. For all respondents, we found that there was a sufficient number of sales above the COP to permit the continued use of the third country market sales as the basis for determining FMV.

If over 90 percent of a respondent's sales were at prices above the COP, we did not disregard any below-cost sales because we determined that the respondent's below-cost sales were not made in substantial quantities over an extended period of time. If between 10 and 90 percent of a respondent's sales were at prices above the COP, we disregarded only the below-cost sales. In such cases, we determined that the respondent's below-cost sales were made in substantial quantities over an extended period of time. (See the company-specific sections below.)

Where necessary, we revised the product concordances to enable us to match to MMF sweaters which were sold at prices above the COP, using the criteria set forth in the "Such or Similar Comparisons" section of the notice.

A. Chunji

We determined that sales to Mexico were the most appropriate basis for calculating FMV, as described above.

In order to determine whether third country sales were above the COP, we calculated the COP on the basis of Chunji's cost of materials, labor, other fabrication costs, and general expenses. The COP data submitted by Chunji was relied upon, except in the following instances where the costs were not appropriately quantified or valued.

We adjusted general and administrative expenses to include donations. Furthermore, we calculated an average cost of goods sold because the company's fiscal year ends in the middle of the POI. (See DOC Position to Comment 5 in the "Interested Party Comments" section of this notice.)

The Department revised variable costs for the proportional effect of the labor strike and certain clerical errors. (See DOC Position to Comment 17 in the "Interested Party Comments" section of this notice.)

We reduced interest expense by allocating a portion of it to the investment activities of the company. In addition, we disallowed the gain and loss on disposal of marketable securities, interest income earned on long-term deposits, gains and losses on foreign exchange transactions, and included the amortization of debenture issue costs, debenture expenses, and new stock issue costs as financial expenses. Finally, we calculated an average interest expense percentage from financial statements over an 18-month period. (See DOC Position to Comment 8 in the "Interested Party Comments" section of this notice.)

We found that over 90 percent of sales to Mexico were made at prices above the COP and used all sales as the basis for determining FMV. We calculated FMV based on packed, f.o.b. Korean port prices to unrelated customers in Mexico.

Based on our findings at verification, we adjusted Chunji's data for certain minor clerical errors. We recalculated indirect selling expenses. (See DOC Position to Comment 15 in the "Interested Party Comments" section of this notice.) We increased the quantity for one sale to reflect the total quantity listed on the revised purchase order.

We made deductions, where appropriate, for foreign brokerage and

handling expenses, foreign inland freight, and wharfage fees. We deducted third country packing costs and added U.S. packing costs, in accordance with section 773(a)(1)(B) of the Act. We added import duties that were refunded by reasons of exportation to the third country.

We made adjustments for differences in circumstances of sale, where appropriate, for differences in banking and credit expenses in accordance with § 353.56 of the Department's regulations (19 CFR 353.56). We made further adjustments, where appropriate, for differences in commissions when incurred in both markets, in accordance with § 353.56(a)(2) of the Department's regulations. Where commissions were paid in the Mexican market and not the U.S. market, we allowed an adjustment for indirect selling expenses incurred in the U.S. market to offset commissions in the Mexican market, in accordance with § 353.56(b) of the Department's regulations.

In addition, where appropriate, we made adjustments to account for differences in physical characteristics of the merchandise, in accordance with § 353.57 of the Department's regulations. Chunji separately reported total variable costs, used for this adjustment, inclusive of duties paid on materials. In addition, Chunji reported both duties paid on the materials and duty drawback received on the exported merchandise. We subtracted duties paid and added duty drawback to the total variable costs to be consistent with our treatment of duties for the other respondents. (See DOC Position to Comment 3 in the "Interested Party Comments" section of this notice.)

B. Hanil

We determined that sales to Australia were the most appropriate basis for calculating FMV, as described above.

In order to determine whether third country sales were above the COP, we calculated the COP on the basis of Hanil's cost of materials, labor, other fabrication costs, and general expenses. The COP data submitted by Hanil was relied upon, except in the following instances where the costs were not appropriately quantified or valued.

The cost of manufacturing for certain products was adjusted to correct clerical errors in the cost of manufacturing calculations.

General and administrative expenses were adjusted to exclude: (1) All non-operating and extraordinary items which were not related to the production operations of the company; (2) the gain on the sale of a real estate

investment; and (3) a portion of general research and development expense which was considered specific to product lines other than MMF sweaters. (See DOC Position to Comment 10, 29 and 30 in the "Interested Party Comments" section of this notice.)

Interest expense was adjusted to: (1) Allocate the portion of it attributable to investment activities; (2) disallow long-term interest income as an offset to interest expense; and (3) reclassify amortization of new stock issue costs and debenture issue costs from general and administrative expense to interest expense. (See DOC Position to Comment 8 in the "Interested Party Comments" section of this notice.)

We found that less than 90 percent but more than 10 percent of sales to Australia were made at prices above the COP considered only the above-cost sales as the basis for determining FMV. We disregarded the below-cost sales in our analysis. We calculated FMV based on packed, f.o.b. Korean port prices to unrelated customers in Australia. Based on our findings at verification, we adjusted Hanil's data for certain minor clerical errors.

We made deductions, where appropriate, for foreign brokerage and handling expenses, wharfage fees and containerization expenses. We deducted third country packing costs and added U.S. packing costs, in accordance with section 773(a)(1)(B) of the Act. We added import duties rebated by reason of exportation to the third country.

We made adjustments for differences in circumstances of sale, where appropriate, for differences in credit and banking expenses, in accordance with section 353.56 of the Department's regulations. Because Hanil failed to report credit expenses on purchase price and third country sales for the period between shipment and payment, we calculated credit expenses for this period for these sales. Furthermore, because Hanil did not report an interest rate in its questionnaire response, we used the highest interest rate reported by another Korean respondent contained in a public response in this investigation as best information available. We also made an adjustment, where appropriate, using third country indirect selling expenses to offset commissions paid in the United States, in accordance with § 353.56(a)(2) of the Department's regulations.

For comparisons involving ESP transactions, we made further deductions for third country indirect selling expenses capped by indirect selling expenses incurred on ESP sales, in accordance with § 353.56(b)(2) of the Department's regulations.

In addition, where appropriate, we made adjustments to account for differences in physical characteristics of the merchandise, in accordance with § 353.57 of the Department's regulations. Hanil reported total variable costs, used for this adjustment, inclusive of duties paid on materials. However, because Hanil failed to report separately the duties paid on those materials, we could not subtract duties paid and add duty drawback as we did for Chunji. Therefore, we used Hanil's reported total variable costs as best information available to be consistent with our treatment of duties for the other respondents. (See DOC Position to Comment 3 in the "Interested Party Comments" section of this notice.)

C. Shinwon

We determined that sales to Canada were the most appropriate basis for calculating FMV, as described above.

In order to determine whether third country sales were above the COP, we calculated the COP on the basis of Shinwon's cost of materials, labor, other fabrication costs, and general and administrative expenses. The COP data submitted by Shinwon was relied upon, except in the following instances where the costs were not appropriately quantified or valued.

We adjusted the general and administrative expenses to include the export losses and donations. Furthermore, we adjusted the cost of goods sold from the financial statements used in calculating the general and administrative expenses rate in order to make the cost of goods sold comparable to the cost of manufacturing used in the submission. Certain expenses recorded in the company's financial statements as manufacturing costs were reclassified as selling expenses for the submission.

We found that less than 90 percent but more than 10 percent of sales to Canada were made at prices above the COP and considered only the above-cost sales as the basis for determining FMV. We disregarded the below-cost sales in our analysis. We calculated FMV based on packed, f.o.b. Korean port prices to unrelated customers in Canada. Based on our findings at verification, we adjusted Shinwon's data for certain minor clerical errors.

Shinwon reported an amount for "commission payments" in the Canadian market. However, in addition to actual commissions paid, the reported amount also included certain non-commission payments which we have reclassified as quota payments. (See DOC Position to Comment 4 in the "Interested Party Comments" section of this notice.) These quota payments have

been treated as direct selling expenses not subject to the commission offset. At verification, we noted for certain transaction that the gross unit price reported in Shinwon's sales listing was actually the amount received by the unrelated quota holder, not the actual amount received by Shinwon. Shinwon received only the amount net of quota payment. Accordingly, we recalculated credit and indirect selling expenses, which are based on gross unit price, on the basis of the amount actually received by Shinwon.

We made deductions, where appropriate, for foreign brokerage and handling expenses, foreign inland freight, wharfage fees and containerization expenses. We deducted third country packing costs and added U.S. packing costs, in accordance with section 773(a)(1)(b) of the Act. We added import duties that were refunded by reasons of exportation to the third country.

We made adjustments for differences in circumstances of sale, where appropriate, for differences in banking expenses, credit expenses, and quota payments, in accordance with § 353.56 of the Department's regulations. We made further adjustments, where appropriate, for differences in commissions when incurred in both markets, in accordance with § 353.56(a)(2) of the Department's regulations. Where commissions were paid in one market and not in the other, we allowed an adjustment for indirect selling expenses incurred in the other market to offset commissions, in accordance with § 353.56(b) of the Department's regulations.

In addition, where appropriate, we made adjustments to account for differences in physical characteristics of the merchandise, in accordance with § 353.57 of the Department's regulations. Shinwon reported total variable costs, used for this adjustment, exclusive of duties paid. It also separately reported the duty drawback received on the exported merchandise. We added duty drawback to the total variable costs to be consistent with our treatment of duties for the other respondents. (See DOC Position to Comment 3 in the "Interested Party Comments" section of this notice.)

D. Young Woo

We determined that sales to the United Kingdom were the most appropriate basis for calculating FMV, as described above.

In order to determine whether third country sales were above the COP, we calculated the COP on the basis of

Young Woo's cost of materials, labor, other fabrication costs, and general expenses. The COP data submitted by Young Woo was relied upon, except in the following instances where the costs were not appropriately quantified or valued.

The cost of manufacturing was adjusted to reflect the rent paid by Young Woo to Young Chang, a related company, instead of the depreciation expense and other actual costs of the building rented by Young Woo. Since Young Woo does not have direct ownership of Young Chang, nor are they under common control, rental charges as opposed to actual costs were used. (See DOC Position to Comment 22 in the "Interested Party Comments" section of this notice.)

General and administrative expenses were adjusted to include donations and amortization of software development costs. Furthermore, general and administrative expenses were calculated as an annual percentage. (See DOC Position to Comment 10 in the "Interested Party Comments" section of this notice.)

We reduced interest expense by allocating a portion to the investment activities of the company. Furthermore, we disallowed the gain and loss on foreign exchanges and interest income earned on long-term investments and included the amortization of stock issue costs. Finally, we calculated an interest expense percentage from annual financial statements. (See DOC Position to Comments 8, 9, and 11 in the "Interested Party Comments" section of this notice.)

We found that over 90 percent of sales to the United Kingdom were made at prices above the COP and considered all sales as the basis for determining FMV. We calculated FMV based on packed, f.o.b. Korean port or C&F U.K. port prices to unrelated customers in the United Kingdom. Based on our findings at verification, we adjusted Young Woo's data for certain minor clerical errors.

We made deductions, where appropriate, for foreign brokerage and handling, foreign inland freight, wharfage fees, and ocean freight. In addition, we made deductions, where appropriate, for discounts. We deducted third country packing costs and added U.S. packing costs, in accordance with section 773(a)(1)(B) of the Act. We added import duties rebated by reason of exportation to the third country.

We made adjustments for differences in circumstances of sale, where appropriate, for differences in banking expenses, credit expenses, quota payments, and product liability

premiums, in accordance with § 353.56 of the Department's regulations. We determined that these product liability premiums were direct selling expenses because we verified that Young Woo was required by the customer to pay these premiums and that these payments were tied to specific sales. We made further adjustments, where appropriate, for differences in commissions when incurred in both markets, in accordance with § 353.56(a)(2) of the Department's regulations. Where commissions were paid in one market and not the other, we allowed an adjustment for indirect selling expenses incurred in the other market to offset commissions, in accordance with § 353.56(b) of the Department's regulations.

In addition, where appropriate, we made adjustments to account for differences in physical characteristics of the merchandise, in accordance with § 353.57 of the Department's regulations. Young Woo reported total variable costs, used for this adjustment, inclusive of duties paid on materials. Young Woo also separately reported both duties paid on the materials and duty drawback received on the exported merchandise. We subtracted duties paid and added duty drawback to the total variable costs to be consistent with our treatment of duties for the other respondents. (See DOC Position to Comment 3 in the "Interested Party Comments" section of this notice.)

E. Yurim

We determined that sales to Canada were the most appropriate basis for calculating FMV, as described above.

In order to determine whether third country sales were above the COP, we calculated the COP on the basis of Yurim's cost of materials, labor, other fabrication costs, and general expenses. The COP data submitted by Yurim was relied upon, except in the following instances where the costs were not appropriately quantified or valued.

The cost of manufacturing for certain products was adjusted to correct clerical errors in the most cost of materials calculations.

We adjusted general and administrative expenses to include: (1) The loss on disposal of raw yarn inventory which was related to production in general but not specifically to the products under investigation and (2) donations. Furthermore, we excluded insurance expense as this amount was already included in factory overhead. Finally, we reclassified the general and administrative expenses of a related

selling company as indirect selling expenses.

In addition, interest expense was adjusted to:

- (1) Reduce interest expense by allocating a portion to the investment activities of the company;
- (2) Exclude gain and loss on disposal of marketable securities;
- (3) Exclude long-term interest income;
- (4) Exclude trade notes receivable and foreign currency accounts receivable from the calculation of the credit offset to interest expense; and
- (5) To include amortization of debenture issue costs.

We found that less than 90 percent but more than 10 percent of sales to Canada were made at prices above the COP and considered only the above-cost sales as the basis for determining FMV. We disregarded the below-cost sales in our analysis. We calculated FMV based on packed, f.o.b. Korean port prices to unrelated customers in Canada. Based on our findings at verification, we adjusted Yurim's data for certain minor clerical errors.

Yurim reported an amount for "commission" payments in the Canadian market. However, the reported amount consisted entirely of non-commission payments which we have reclassified as quota payments. These quota payments have been treated as direct selling expenses not subject to the commission offset. (See DOC Position to Comment 4 in the "Interested Party Comments" section of this notice.) At verification, we noted that for certain transactions the gross unit price reported in Yurim's sales listing was actually the amount received by the unrelated quota holder, not the actual amount received by Yurim. Yurim received only the amount net of quota payment. Accordingly, we recalculated credit and indirect selling expenses, which are based on gross unit price, on the basis of the price actually received by Yurim.

We made deductions, where appropriate, for foreign brokerage and handling expenses, foreign inland freight, wharfage fees and containerization expenses. We deducted third country packing costs and added U.S. packing costs, in accordance with section 773(a)(1)(B) of the Act. We added import duties that were refunded by reason of exportation to the third country.

We made adjustments for differences in circumstances of sale, where appropriate, for differences in banking expenses, credit expenses, price adjustment claims, and quota payments, in accordance with § 353.56 of the

Department's regulations. We made a further adjustment, where appropriate, using Canadian indirect selling expenses to offset commissions paid in the United States, in accordance with § 353.56(b) of the Department's regulations.

In addition, where appropriate, we made adjustments to account for differences in physical characteristics of the merchandise, in accordance with § 353.57 of the Department's regulations. Yurim reported total variable costs, used for this adjustment, exclusive of duties paid. It also reported separately the duty drawback received on the exported merchandise. We revised variable costs for certain clerical errors made by Yurim in computing yarn costs. We added duty drawback to the total variable costs to be consistent with our treatment of duties for the other respondents. (See DOC Position to Comment 3 in the "Interested Party Comments" section of this notice.)

Currency Conversion

We made currency conversions in accordance with § 353.60(a) of the Department's regulations (19 CFR 353.60). All currency conversions were made at the rates certified by the Federal Reserve Bank.

Verification

We verified the information used in making our final determination in accordance with section 776(b) of the Act. We used standard verification procedures including examination of relevant accounting records and original source documents of the respondents. Our verification results are outlined in the public versions of the verification reports which are on file in the Central Records Unit (Room B-099) of the Main Commerce Building.

Interested Party Comments

All comments raised by parties to the proceeding in the antidumping duty investigation of MMF sweaters from Korea are discussed below.

Comment 1

Petitioner contends that the Department erred by not expanding the POI to cover the 12 months from October 1988 through September 1989, as requested in its November 21, 1989, submission. Petitioner argues that the "normal" six-month POI should have been expanded to obtain a reasonable and representative measure of the respondents' pricing practices. Petitioner further argues that the effects of this error are magnified because the Department did not investigate the normal 60 percent of exports to the United States during the POI and

because the small number of companies that it did investigate had made only a small portion of their annual sales during that period.

Respondents maintain that the Department properly exercised its discretion in adhering to a normal six-month POI and that petitioner has presented no new evidence for expanding the POI. Respondents assert that the Department's decision was based on information contained in the record and is in accordance with the U.S. trade law. Accordingly, the Department should affirm its preliminary determination not to expand the investigative period.

DOC Position

We agree with respondents. First, we note that petitioner's initial request that the POI be expanded included not only Korea, but Hong Kong and Taiwan as well. It was on that basis that we analyzed this issue across all three investigations. As we stated in our preliminary determination, petitioner in its November 21, 1989, submission failed to provide adequate justification for expanding the POI. Specifically, petitioner did not adequately demonstrate that seasonal effects exist nor did it explain what bearing such effects would have on the investigation. For example, petitioner argued that a low percentage of yearly sales occurred during the months covered by the "normal" six-month POI. However, our analysis of the data provided by respondents in their Section A responses revealed that the percentage of yearly sales made during the normal POI varied greatly among producers and across the three countries whose export of MMF sweaters are being investigated. Furthermore, petitioner did not explain why in this investigation a low percentage of sales during the POI for a particular firm would be necessarily indicative of unrepresentative prices. Accordingly, the POI was not changed.

Comment 2

Shinwon and Yurim contend the Department improperly initiated a cost of production investigation in this proceeding. Respondents maintain that the Department disregarded the standard for initiating a COP investigation set forth in *Al Tech Specialty Steel Corp. v. United States*, 575 F. Supp. 1277 (CIT 1983), which requires "a specific and objective basis for suspecting that a particular foreign firm is engaged in sales below its cost of production." Respondents claim that the Department mistakenly relied on petitioner's data regarding fixed factory overhead costs which had no source

documentation and on petitioner's derivation of general and administrative expenses despite the fact that Yurim had submitted its own actual general and administrative expenses. In addition, Shinwon and Yurim assert that the petitioner's calculations of company-specific interest expenses were inaccurate because they were not offset by interest income. Respondents argue that because the Department improperly initiated a COP investigation, it should disregard the cost data and rely upon a price-to-price analysis.

DOC Position

We disagree with respondents. Petitioner provided the Department with a reasonable basis to believe or suspect that the companies involved made sales to third countries at prices below the cost of production. Accordingly, we initiated a COP investigation. Contrary to respondents' assertions, the Department did not disregard the standard for initiating COP investigations which requires "a specific and objective basis" for suspecting below-cost sales. We required petitioner to consider the company-specific data on the record for purposes of its allegation because that information was available to petitioner and was considered to be more specific and objective than, for example, cumulative or average data compiled for a cost report.

Furthermore, respondents' contention that petitioner incorrectly ignored their data in calculating factory overhead and general and administrative expenses is not justified. Petitioner adequately addressed all of the information on the record in making its allegations. Petitioner either used the information on the record or justified to our satisfaction its reasons for not using that information.

Comment 3

Shinwon and Yurim contend that the Department should add U.S., and not third country, duty drawback to FMV in order to avoid creating artificial margins where the drawback amounts differ. Shinwon and Yurim state that duties paid are not included in either company's cost of production, nor are they reflected in particular export transaction prices. Shinwon and Yurim maintain that adding U.S. duty drawback to third country price is consistent with past Departmental practice, as evidenced by the *Final Determination of Sales at Less Than Fair Value: Bicycles from Taiwan*, 48 FR 31688 (July 11, 1983). Shinwon and Yurim state that because they are only two

respondents in this investigation that do not include duties paid in their cost of production, this issue is relevant to them only. The other Korean respondents provided no comment on this issue.

Petitioner maintains that Shinwon's and Yurim's proposed approach is not consistent with the purpose of the antidumping "price-to-price" calculations, which is essentially to determine whether the profit realized in the market on which the FMV calculations are based is greater than the profit realized on the U.S. export sales. Petitioner maintains that the calculation of FMV should reflect actual duty drawback amounts received.

DOC Position

We disagree with respondents' contention that U.S. duty drawback should be added to FMV. FMV is normally based on sales in the home market. When making comparisons between sales in the United States and the home market, the Act requires that we add duty drawback to the United States price and compare the adjusted price to the home market price which already includes duties paid on imported materials. When third country sales are the basis for FMV, we add the actual duty drawback received on third country sales to FMV in order to effect a fair comparison to U.S. sales that include the amount of actual duty drawback received.

When calculating an adjustment for physical differences in merchandise, we have included duties paid on the material inputs because we recognize that duties paid are a cost to produce the merchandise. To the extent that the physical difference between comparison merchandise are associated with different amounts of imported materials, the adjustment for physical differences in merchandise will include different duty amounts.

Shinwon's and Yurim's argument that "artificial margins" are created is not justified. Any difference in duties between the U.S. and comparison third country product, which would be based on different amounts of imported inputs, will be accounted for by the adjustment for physical differences in merchandise and the addition of the actual duty drawback received in U.S. and third country sales.

We do not agree with Shinwon's and Yurim's argument that duties should be treated differently for them than for Chunji, Hanil, and Young Woo because import duties paid are not included in either company's accounting records as cost of goods sold. The fact that some companies record duty paid and duty drawback differently than others does

not change the treatment of duties in the fair value comparisons. Indeed, because each respondent used a different method of reporting the duty paid on the material portion of the total variable costs used in the adjustment for physical differences in merchandise, we have recalculated these total variable costs to ensure that all Korean respondents are treated consistently. (See the company-specific sections of the "Foreign Market Value" section of this notice.)

Comment 4

Shinwon and Yurim maintain that certain payments made to unrelated quota holders are fees paid for assistance in making sales, and are recorded in their books as commissions. Therefore, Shinwon and Yurim maintain that these payments should be treated as commissions subject to the purchase price commission and indirect selling expense offsets.

Petitioner maintains that the Department properly treated these payments as direct selling expenses in its preliminary determination.

DOC Position

We agree with petitioner. The unrelated quota holder does not perform functions similar to those performed by a commission agent. The unrelated quota holder is a producer of sweaters. It does not enter into negotiations with respondent's customers; it merely provides a portion of its quota allotment to other producers for a fee and processes the payment from the U.S. customer. By contrast, a commission agent negotiates sales transactions directly with the customer, or on the customer's behalf. Therefore, we will continue to classify quota fees paid to unrelated parties as direct selling expenses, rather than as commissions.

Comment 5

For Chunji and Young Woo, respondents that recorded the duties paid as part of the material costs on their internal records, petitioner argues that the Department should not permit a deduction from the cost of materials for the amount of duty drawback, since respondents did not prove that the drawback matched the duties paid. For Shinwon and Yurim, respondents that did not record duties as part of materials costs on their internal records, petitioner argues that the respondents' methodology is unacceptable.

Chunji and Young Woo assert that, because a third country market rather than the home market is used as the basis for FMV, duties paid are appropriately deducted from the COP and CV calculations. They also argue

that, in the aggregate, duty drawback could never exceed duties paid and, therefore, duty drawback may be used as a surrogate for duty paid. However, they state that because both duties paid and duty drawback have been provided, verified data is available for any decision the Department may make.

Shinwon and Yurim argue that their accounting records do not track import duties paid for a particular transaction and, thus, they could not report actual duties paid per transaction. Moreover, because duties are not reflected in the cost or sales price of the third country product being compared to the U.S. sales prices, there is no reason to include duties in CV calculations. However, if the Department finds it necessary to include duties in the material costs, the duty drawback reported by the companies should be included as the best evidence of duty paid.

DOC Position

The product-specific costs of production which were compared to the third country sales prices did not include the duty paid on the materials because the sales prices were reported net of duty drawback. Therefore, for purposes of calculating the cost of production and performing the cost test, no adjustment was made for any of the five respondents.

Since CV was not used as the basis for FMV, the treatment of duties in CV is moot.

Comment 6

Petitioner argues that the general and administrative expense and the interest expense calculations should be based on full fiscal year data in order to avoid distortions created by using the POI data.

Chunji and Young Woo contend that, since the general and administrative expense rate and the interest rate are applied to each product's cost of manufacture, it is necessary to calculate these percentages based on cost of manufacture for the POI. Shinwon and Yurim argue that general and administrative expenses should be calculated over the six-month POI and not on an annual basis so that costs are most accurately reflected for the products under investigation. Shinwon and Yurim further claim that all year-end adjustments were properly apportioned to the POI. Therefore, the reported general and administrative expenses represent the most accurate calculation of costs.

DOC Position

The use of an annual general and administrative expense percentage most accurately reflects the costs incurred to produce the subject merchandise.

General and administrative expenses are not incurred directly with the level of production. These expenses may be incurred on an annual, semi-annual, or quarterly basis and may occur at irregular intervals throughout the year. Therefore, expenses relevant to the operations in a six-month period sometimes were recorded prior to or subsequent to such time. If the Department calculated general and administrative expenses using only a six-month basis, the expenses relevant to the production during the POI would not be fully captured.

For Yurim, Young Woo, and Shinwon, we calculated the annual general and administrative percentage using annual financial statements. Because Chunji's fiscal year ends during the POI on June 30, two financial statements were used to compute general and administrative expenses and financial expenses (*i.e.*, the statement for the fiscal year ended June 30, 1989, and the statement for the six months ended December 31, 1989).

Comment 7

Petitioner argues that the materials cost calculations for Hanil and Chunji are unacceptable. For Hanil, petitioner states that it appears that the materials costs were based on a 10-month average. For Chunji, petitioner states that it appears that the materials costs were distorted by the use of six-month averages for yarn costs.

Chunji contends that it complied with the Department's instructions in the May 3 questionnaire and revised its yarn costs appropriately. Accordingly, Chunji did not use six-month average yarn purchase prices to calculate material costs for COP and CV, but instead asserts that it used a monthly weighted-average yarn cost for the POI. Hanil also stated that a monthly weighted average cost was used per the Department's instructions on May 3.

DOC Position

We agree with respondents. Monthly weighted-average material costs were submitted by both Chunji and Hanil in the COP and CV calculations and were verified. Because both companies purchased raw materials for inventory and did not identify materials drawn from inventory for each sales transaction, the Department accepted the monthly weighted-average cost as being representative of actual costs. The response which the Department verified

was not based on materials costs averaged over a 10-month period and a six-month period for Hanil and Chunji, respectively.

Comment 8

Petitioner argues that interest expenses should not be offset by interest income from long-term investments for Chunji, Young Woo, Shinwon, and Yurim because this income does not appear to be related to sweater production. In addition, petitioner contends that, Hanil, Yurim and Chunji should not offset interest expenses with other gains from investment activities such as capital gains.

Yurim argues that long-term interest income should not be automatically treated as earnings from investment activity, but should be evaluated as to the nature of each income item. Additionally, Yurim, Chunji, and Hanil contend that gains on the disposition of short-term securities should be allowed as an offset to interest expense. Respondents explained that when surplus funds from operations are available, these funds will be placed in short-term bank deposits or short-term securities. When cash for operations is needed, funds are withdrawn from bank deposits or securities are sold and the gain or loss is recognized.

Hanil argues that interest expenses must be allocated to reflect the financing costs of a company's production operations and its investment activities. It understands that the Department's policy is to allocate a company's financing expenses to all lines of business without regard for which assets were purchased in connection with the debt. As such, Hanil contends that, given that the investment activity of the company is a separate line of business, this line of business should also bear a portion of the interest expense incurred.

DOC Position

For all respondents in this case, we reduced total interest expense for that portion attributable to the investment activity of the company. Additionally, short-term interest income accruing from certain types of temporary, short-term investments related to the current operations of the company was offset against remaining interest income.

We agree with Hanil that interest expense is related to all lines of business in which the company is involved, including investment activity. Therefore, the Department allocated a percentage of interest expense to investment activity based on income earned.

We disagree with Yurim, Chunji, and Hanil with regard to the argument that gains on the disposition of short-term securities should be allowed as an offset to interest expense. Such gains were not used as a direct offset to interest expense because the Department considered the underlying assets to be involved in the investment line of business. However, these gains were included in the Department's allocation of interest expense to investment activities.

For this case, we based the allocation of interest expense on income earned from investments and from the manufacturing line of business as reported on the company's income statement in order to capture all interest expense incurred during a period of time. We did not use the company's asset structure as reported on the balance sheet as a basis for interest allocation to the different lines of business because of the different methods used in valuing assets, *e.g.*, manufacturing assets are depreciated and investment assets remain on a historic cost basis.

Comment 9

Petitioner contends that foreign exchange gains or losses related to the purchase of raw materials should not be included in the material cost calculations nor in the calculation of finance expense. Petitioner claims that Shinwon, Hanil, Young Woo and Chunji did not provide support that these gains and losses were related to the production of sweaters.

Hanil, Chunji and Young Woo contend that gains and losses on foreign currency transactions which pertain solely to the production activity of all products are actual, realized gains and losses and thus should be included in the cost of production. In addition, Hanil argues that foreign currency gains and losses from accounts receivable should also be included.

DOC Position

If a company experienced an exchange gain or loss on the purchase of inputs used in the production of the merchandise under investigation, these gains or losses may be considered as part of the materials cost. None of the respondents in this case provided the Department with this information.

In response to Hanil's argument concerning the gains and losses on accounts receivable, the Department does not include exchange gains or losses resulting from the sales of merchandise recorded on the companies' records because, in

accordance with § 353.60 of the Department's regulations, the exchange rate used to convert third country sales to U.S. dollars is that in effect on the date of the U.S. sale.

Comment 10

Petitioner argues that certain expenses classified as non-operating expenses, such as donation expenses, should be included in the cost of production for Chunji, Young Woo, Shinwon, and Yurim. Petitioner also contends that other non-operating expenses, such as software development costs for Young Woo, the loss on disposal of raw yarn inventory for Yurim, and the export losses for Shinwon, should be included in general and administrative expenses because the Department normally considers such expenses to be part of general expenses.

Chunji and Young Woo argue that these items should not be included in the calculation of general and administrative expenses because they are classified as non-operating items on the financial statements and are not directly related to sales or production of the company. Yurim, Chunji and Young Woo argue that non-operating income should be permitted as an offset to any non-operating expenses included by the Department in the final determination.

Hanil argues that all items of non-operating income and expenses and various extraordinary gains and losses were appropriately included in its calculation of general and administrative expenses because these items were related to production operations.

DOC Position

We agree with petitioner and have included the above-mentioned expenses as part of general and administrative expenses for Shinwon, Yurim, Chunji and Young Woo since these types of expenses are normally treated as general costs of business operations.

For Hanil, we adjusted the respondent's submission to include only those items which would normally be treated as general costs of business operations. All other items were considered to be non-operating and not related to the operations of the company.

Comment 11

Petitioner argues that respondents should have included amortization costs for debenture and new stock issues in the calculation of interest expenses for Chunji, Young Woo, Yurim and Shinwon.

Chunji, Young Woo, Yurim, and Shinwon argue that these items are

classified as non-operating items on the financial statements and are not directly related to sales or production operations of the company.

DOC Position

We agree with petitioner and have included these expenses as part of financial expenses because these expenses are incurred in obtaining the funds required to operate the company.

Comment 12

Chunji and Young Woo maintain that their methodology for determining the weight per dozen sweaters is reasonable and was consistently applied to both markets. Chunji and Young Woo state that they reported net weight because it is only net weight that does not include the weight of extraneous materials (e.g., packing materials, accessories, etc.). Accordingly, they submit that the Department should accept their methodology of using net weight as the appropriate measure of weight per dozen sweaters.

DOC Position

We accept Chunji's and Young Woo's argument that it is appropriate to exclude the weight of packing materials from the reported weight per dozen sweaters, however, accessories should be included in the weight of the sweaters. We also found at verification that the difference between net weight and weight inclusive of accessories is small in most instances. Given that we do not have adequate information to revise Chunji's and Young Woo's product matching codes to include the weight of accessories in the reported weight and that net weight was reported consistently across both the U.S. and third country markets, we accept their methodology as best information available.

Comment 13

Chunji and Young Woo claim that they appropriately classified all merchandise sold to either the United States or the largest third country as either an MMF sweater or a non-MMF product. According to Young Woo, the minor discrepancies found at verification did not involve sales to the United States or would not affect the selection of the appropriate third country market.

DOC Position

We agree. At verification, we reviewed Chunji's and Young Woo's systems for designation of merchandise as either an MMF sweater or a non-MMF product. We found either that the products reviewed were appropriately

classified or that the errors discovered were minor and did not affect the selection of the third country market used as the basis for FMV.

Comment 14

Chunji and Young Woo maintain that the export fee charged by the Korean Garment and Knitwear Export Association (KGKEA) is a standard fee for an export license which is properly classified as an indirect selling expense. Because this export fee is the same regardless of destination, it is not a *bona fide* difference in the circumstance of sale. Furthermore, respondents argue that, due to the small size of this adjustment, re-classification of this fee as a direct selling expense would have no measurable effect on the margin calculation.

Petitioner claims that the export fee should be classified as a direct, not an indirect, selling expense.

DOC Position

We agree with petitioner. However, we did not reclassify this expense because there is no practical way to segregate these fees from indirect selling expenses. Moreover, this fee, which is the same on sales to both markets, is too small to have any effect on the fair value comparisons.

Comment 15

Chunji and Young Woo claim that the errors found at verification in the calculation of indirect selling expenses do not significantly distort the indirect selling expense rate and would have no measurable impact on any dumping margin.

DOC Position

We agree that the errors found at verification are not significant for either company. For purposes of the final determination, however, we have recalculated Chunji's indirect selling expense ratio based on the verified information. We made no changes to Young Woo's indirect selling expense ratio, because the errors found at verification did not alter the percentage reported.

Comment 16

Chunji maintains that it reported the correct price for a particular sale, even though the price reported by Chunji was higher than the price listed on the purchase order. Chunji asserts that the price reported is different from that shown on the purchase order because it reflects compensation granted to the customer for quality problems related to a purchase prior to the POI.

DOC Position

We agree. At verification we examined correspondence between Chunji and its customer documenting the quality problems of the prior sale. Based on that and other documentation reviewed at verification, we were satisfied that the discount granted resulted from the sale prior to the POI. Therefore, for purposes of our final determination we are accepting the higher price reported by Chunji.

Comment 17

Petitioner argues that losses incurred due to a labor strike in Chunji's factory during the POI should be included in the cost of production since the cost of idle assets is a cost of maintaining all factory assets. Petitioner cites the Final Determination of Sales at Less Than Fair Value: Mechanical Transfer Presses from Japan (MTPs), 55 FR 335 (Jan. 4, 1990) where the Department included depreciation expense on idle equipment in factory overhead because such expense is part of the cost of maintaining all factory assets.

Chunji argues that, since it had never experienced a labor strike before April 1989, the expenses incurred during the strike should be considered extraordinary and not included in the cost of production. Chunji states that in prior cases the Department has recognized that extraordinary expenses and losses may be excluded from the cost of production.

DOC Position

We agree with petitioner. We adjusted Chunji's fabrication costs by attributing expenses incurred during the labor strike to the total production of the year. Because strikes are not considered unusual in nature for a manufacturing concern, these costs incurred during the strike are not considered extraordinary.

Comment 18

Petitioner argues that the Department must include the depreciation expenses for fixed asset additions that were acquired during Chunji's 1989 fiscal year. Chunji contends that it does not depreciate the additions to fixed assets during the year when the value of these additions is not significant.

DOC Position

We agree with petitioner and have adjusted the depreciation expense related to those products manufactured in Chunji's factory. These assets were part of the overall production assets for manufacturing sweaters.

Comment 19

Young Woo maintains that it properly reported certain local letter of credit (L/C) charges (opening, advising, and transfer charges) as indirect selling expenses. Young Woo maintains that the classification of these charges as indirect rather than direct selling expenses is justified because (1) these charges do not affect the sales price; (2) they are not sale-specific, since these letters of credit can be used for an indefinite number of shipments; and (3) they are associated with internal management of funds, as local letters of credit are used uniquely for the transfer of payment from its related party to Young Woo.

Petitioner claims that the Department has traditionally considered letter of credit charges to be directly related circumstance of sale adjustments. Therefore, petitioner maintains that they should properly be treated as direct selling expenses.

DOC Position

We agree with respondent. These L/C charges can be applied to an indefinite number of shipments and are not sale-specific. Therefore, we have classified them as indirect selling expenses.

Comment 20

Young Woo argues that allocating interest income based on the year-end balances of various investment assets would provide a reasonable approximation of interest income earned on short-term investments during the fiscal year, since in Korea interest rates are generally equivalent for both short- and long-term bank deposits and securities.

Petitioner argues that Young Woo should use annual financial data to avoid distortions caused by end-of-period adjustments.

DOC Position

We used the actual interest income earned during the year by these various investments in lieu of the respondent's allocation method because this data was more accurate.

Comment 21

Young Woo argues that the Department should not adjust the fabrication costs for the six sweater styles affected by the allocation error discovered during verification because the effect on overall cost of production is virtually immeasurable.

DOC Position

We agree with the respondent. Because the adjustment has no impact

on the cost of the product, we did not adjust the fabrication costs.

Comment 22

Petitioner argues that for CV, the rent expense incurred by Young Woo for the use of Young Chang's building must be based on the fair market value that Young Woo would have paid to an unrelated party. Young Woo contends that all sweaters manufactured in its factory were sold to the third country and the issue of whether actual depreciation or the fair value of rent expense should be used for CV is moot.

DOC Position

We agree with the respondent that for CV the issue is moot. For COP purposes, actual costs for transactions between these related parties would be used pursuant to generally accepted accounting principles (GAAP) if one of the following situations exist: (1) Both companies are under common control; (2) Young Woo owns 50 percent or more of Young Chang either directly or indirectly; or (3) Young Chang owns 50 percent or more of Young Woo either directly or indirectly. In this case, none of these situations existed. (See Accounting Research Bulletin No. 51.) Therefore, the Department could not use Young Chang's actual cost for the building since Young Chang is not a subsidiary or the parent of Young Woo, nor is there common control of the assets of these two companies.

Comment 23

Petitioner argues that general and administrative expenses incurred by Young Chang should be combined with Young Woo's general and administrative expenses in the final determination since the companies are related and should be treated as one. Petitioner cites Final Determination of Sales at Less Than Fair Value: Color Picture Tubes From Japan (CPTs), 52 FR 44171, Nov. 18, 1987) in support of its argument. Young Woo contends that Young Chang operates as a production division, serving solely as an outside processor and thus all of its general and administrative expenses were appropriately attributed to production costs as factory overhead. Young Woo states that CPTs does not support petitioner's argument because in that case the Department attributed the general and administrative expenses of the parent company to the subsidiary company. In this case, Young Woo can be considered the parent company and its general and administrative expenses have been allocated across all of its production.

DOC Position

In this case, the facts differ as Young Woo is not the parent of Young Chang and the Department has no basis to treat the companies as one entity. Since Young Chang only operates as a production facility, all costs are considered production costs rather than as both production and general costs.

Comment 24

Hanil contends that the purchase price sales of two styles it had reported in its original response should be dropped from the Department's sales analysis for the final determination. Hanil claims that it originally reported these sales based on the date of follow-up purchase orders issued within the POI. According to Hanil, the terms of sale for both sales were actually set in January 1989, when the customer revised purchase orders it had issued in November 1988. Hanil argues that, due to an error by the customer, replacement purchase orders reflecting the revisions were not issued until after the merchandise was ready for shipment. As evidence that the terms of sale were set prior to the POI, Hanil submitted at verification its own production orders and also internal order records of the customer's representative in Korea. Hanil argues that these documents establish the correct date of sale, since they are the earliest written evidence of agreement between the parties.

Petitioner maintains that the dates of sale for these orders were correctly reported in the original response. According to petitioner, the Department should not rely on either Hanil's or the customer's internal documents to establish date of sale, since Hanil's internal documents do not indicate the terms of sale and the customer's records are not subject to verification. In addition, petitioner notes that all five Korean respondents have used the purchase order to establish the date of sale. According to petitioner, using another document would not only be inconsistent with this approach, but it would also necessitate a review of all purchase orders to confirm that the reported sales were actually made with the POI.

DOC Position

We agree with petitioner. The Department's policy is to establish the date of sale as the date of the first written document indicating that an order has been placed and that the basic terms of the sale have been agreed upon. Production orders do not necessarily indicate that agreement has been reached with the customer. For

example, in this case the price contained in the production order for a particular model is the same as the price reflected in the purchase order issued during the POI, but the quantity listed on the production order is different from the quantity on the purchase order. Furthermore, no delivery occurred until after the purchase order was issued which was over two months after respondents claimed production had been completed. Moreover, as our verification report indicates, there is some indication that the customer believed that it had cancelled the sales at issue. Under such circumstances, we cannot conclude that the production order represents the first document containing the terms agreed upon. Because Hanil failed to provide conclusive evidence that the basic terms were set prior to the POI and continued to remain in effect until delivery, we consider the dates of these sales to be the dates of the purchase orders issued during the POI. Therefore, we included these in our analysis for the final determination.

Comment 25

Hanil maintains that it properly did not report a sale of one style of sweater, since the terms of sale were set prior to the POI. According to Hanil, the price amendment to this sale discovered at verification was not a change in contract terms resulting in a new contract but an agreed settlement to compensate the customer for Hanil's inability to meet the shipping deadline.

DOC Position

We agree with respondent. The documentation reviewed at verification indicates that a purchase order placed prior to the POI set the terms of sale and that the price amendment for this sale which occurred during the POI was in the nature of a delayed-shipment discount or rebate. Consequently, we do not consider this price amendment to constitute a new sale.

Comment 26

Hanil argues that an August 1989 sale it reported in its response was a revision of a previous order placed in July 1989. Hanil contends that it was, therefore, correct in not reporting the July 1989 order as a separate sale.

DOC Position

We agree with respondent. The documentation submitted at verification, which included a telefax from the customer to Hanil, showed that the August 1989 purchase order contained a material revision of a purchase order

issued in July 1989 and was consequently considered a new sale.

Comment 27

Hanil maintains that it erroneously reported average prices for certain sales to Australia, rather than the individual prices it had negotiated for each specific model included in these sales. Hanil claims that the customer, for its own administrative convenience, issued purchase orders containing averaged prices for all models included in the orders. Hanil states that its internal memoranda show that individual prices had been negotiated for each model. Finally, Hanil argues the Department has a clear preference for actual prices, rather than averaged or allocated prices. As support, Hanil cites MTPs as a case where the Department declined to use the averaged prices submitted by the respondent and instead used the individual prices appearing on internal plant orders, sales contracts, or purchase orders. Therefore, Hanil argues that the Department should use the actual model-specific prices it claims to have negotiated with the customer, instead of the prices which appear on the purchase orders issued for these sales.

DOC Position

The Department's preference is to base its analysis on prices contained in official sales documentation such as contracts or purchase orders. In this case, for the sale in question, all the official documentation (e.g., purchase orders, payment records) between Hanil and its customer reflected one price which applied to a variety of sweater styles. As such, we are using that price in our analysis. Hanil is correct when it asserts that we rejected average prices in MTPs. That was done, however, because in that case the sales contracts in fact contained line item prices. While it is appropriate to accept the average prices in this case, we will carefully examine Hanil's use of average prices in any subsequent administrative review, if one is held.

Comment 28

Hanil maintains that the Department should accept the revised volume of sales to the home market and the United Kingdom, since the corrected totals were submitted within the regulatory deadline for submission of factual information.

DOC Position

We found at verification that respondent correctly reported that its home market was not viable and that, during the POI, Australia was the largest

third country market. Therefore, this issue is moot, as we are not using sales to the United Kingdom or home market in our analysis.

Comment 29

Hanil argues that research and development (R&D) costs should remain in general expenses because none of the R&D expense relates directly to the manufacturing of sweaters. Hanil claims that the research efforts which relate to the development and improvement of acrylic fiber benefit all of its products, not just sweaters, and the related costs have been appropriately included in general expenses. It further argues that, in fact, too much R&D cost has been allocated to sweaters. Hanil claims that certain R&D costs are product-specific to another product which is not subject to this investigation. Therefore, the R&D costs which can be solely attributed to that product should not be allocated to sweaters and should be excluded from the calculation of general expenses.

DOC Position

We agree with Hanil. The Department examined the projects in the R&D department during 1989 at verification. Those costs incurred in the development of other products were considered to be only applicable to such products and, therefore, were not included in general expenses.

Comment 30

Hanil argues that gain on the sale of real estate was properly included in the calculation of general expenses. Hanil cites the Final Determination of Sales at Less than Fair Value: Antifriction Bearings (AFBs) (Other Than Tapered Roller Bearings) and Parts Thereof from the Federal Republic of Germany, 54 FR 18992 (May 3, 1989); Final Determination of Sales at Less than Fair Value: Antifriction Bearings (Other Than Tapered Roller Bearings) And Parts Thereof from Japan, 54 FR 19101 (May 3, 1989); and Final Determination of Sales at Less than Fair Value: Certain Small Business Telephone Systems and Subassemblies Thereof from the Republic of Korea, 54 FR 53141 (Dec. 27, 1989) as support for its argument in that the Department has insisted that respondents treat both gains and losses on the disposition of fixed assets as part of their general expenses. Because the asset had been acquired and held with the expectation that it would be used for production, Hanil has properly included the gain resulting from this sale in the calculation of general expenses.

DOC Position

The Department considered the gain resulting from the sale of this asset as investment income. While the Department included the gains and losses on the sale of fixed assets in the calculation of general and administrative expense, unlike the cases cited by the respondent, this particular sale involved an asset which was unrelated to Hanil's production operations. Accordingly, this gain has been included in the calculation of the investment interest offset.

Comment 31

Hanil argues that use of unaudited consolidated financial statements as a basis for calculating interest expense would be distortive and inappropriate. Hanil states that it is not a majority stockholder of the other companies, does not have any control over the financing operations of any other companies included in the consolidated statements and there are no common representatives on the Board of Directors of any of the companies. Hanil also argues that Korean generally accepted accounting principles (GAAP), with respect to consolidation, involves a much broader set of rules than U.S. GAAP. Korean GAAP requires consolidation even if the reporting company is only the largest minority shareholder, contrary to U.S. GAAP in which consolidation is based on majority ownership. Furthermore, these consolidated statements are provided for informational purposes only and are not included as part of a company's principal financial statements under Korean GAAP. Accordingly, these financial statements are not audited and an opinion has not been expressed.

Petitioner argues that the consolidated financial statements should be used in accordance with Department's past practice. Petitioner presents support for its argument by citing Preliminary Determination of Sales at Less Than Fair Value: Certain Small Business Telephone Systems and Subassemblies from the Republic of Korea (SBTS), 54 FR 31980 (Aug. 3, 1989) (where the Department used Samsung's corporate general and administrative expense and finance expense) and AFBs from the Federal Republic of Germany, *supra*, (where the Department allocated the total interest expense to the total operations of the consolidated corporation based on cost of sales).

DOC Position

The Department prefers to use consolidated financial statements for determining the interest expense

applicable to the product under investigation. We use consolidated statements when there is control of the companies being consolidated because all of the funds of the companies included in the consolidated financial statements may be transferred by various means among these companies.

However, in this case, the Department did not use the consolidated statements of the Hanil group because there was no control and there was evidence that all of the appropriate companies required to be included in the statement under Korean GAAP has not been included. Additionally, all of the necessary adjustments to eliminate the financial effects of the transactions among the companies that had been consolidated had not been made. Therefore, the Department concluded that the consolidated financial statements did not fairly reflect the financial condition of the consolidated companies. Similarly, in SBTS, the Department used the corporate financial statements of Samsung, not the audited group consolidated financial statements, since these consolidated financial statements included companies over which there was no control.

Comment 32

Hanil argues that the expenses related to the Industry Rationalization Plan were extraordinary and should not be included as part of the cost of sweaters. Hanil claims that the assumption of Kukje's debt by Hanil was forced by the government and was an unanticipated, one-time, and highly controversial action of the former government and was, therefore, extraordinary in nature. Hanil further argues that the government's action to redistribute wealth away from Hanil's shareholders to the creditors of Kukje is a loss to the stockholders of Hanil which is not recoverable by sales. Just as with the assumption of the debt, the interest expense which Hanil pays on the Kukje debt should not be included in interest expense, since Hanil received no direct benefit from the funds obtained through such borrowings.

Petitioner argues that because these expenses are a cost to the manufacturer, they should be reflected in the COP and CV calculations.

DOC Position

Although Hanil claims that it was forced by the government to acquire the Kukje group and assume certain debts, Hanil also received the rights of ownership of part of Kukje's assets and its potential earnings. Because Hanil provided no documentation to

demonstrate that this type of industry rationalization was unusual in nature or that it was forced to acquire these companies, the Department considered the transaction to be a normal business acquisition. As such, the Department did not include this assumption of debt as an expense of the current operations. Although Hanil will assume certain of Kukje's debt over an extended period, such debt is not payable until 1994. Even when the principal payments are made, these payments are considered a return of capital, not an expense. However, the interest which Hanil paid during the year on the debt which it already assumed from Kukje was included in finance expense since this is an obligation of Hanil.

Comment 33

Shinwon argues that the financing expenses and interest revenues resulting from the issuance of bonds did not relate in any way to operations and should not be included in the calculation of COP or CV. Shinwon states that the bonds were issued on behalf of a related company and were not used in any way in its operations. Furthermore, Shinwon argues that the funds were used to finance a new business venture unrelated to sweater manufacturing. Shinwon states that Department's practice has been to include only financial expenses and income which relate to the ordinary business operations for the merchandise under investigation. For these reasons, Shinwon asserts that the interest expense and interest income related to the issuance of these debentures should not be included in the COP or CV calculations. Finally, Shinwon argues that total interest income from short-term investments which included interest income earned on the above-mentioned debentures should be considered income from operations.

Petitioner argues that Shinwon did not supply evidence to either confirm or verify the claim that this interest expense resulting from the issuance of bonds should not be included.

DOC Position

Financing expense, calculated with or without the income or expense from these bonds, resulted in interest income exceeding interest expense. Therefore, no financing expense was included in the COP.

Suspension of Liquidation

In accordance with section 733(d)(1) of the Act, we are directing the U.S. Customs Service to continue to suspend liquidation of all entries of MMF sweaters from Korea, as defined in the

"Scope of Investigation" section of this notice, that are entered, or withdrawn from warehouse for consumption, on or after the date of publication of this notice in the **Federal Register**. The U.S. Customs Service shall require a cash deposit or posting of a bond equal to the estimated amounts by which the foreign market value of MMF sweaters from Korea exceeds the United States price as shown below.

We are also instructing the U.S. Customs Service to require that both exporter of record and manufacturer be listed on all invoices accompanying imports of MMF sweaters to the United States. If the manufacturer is not listed, the "all others" rate will be applied. This suspension of liquidation will remain in effect until further notice.

The weighted-average margins are as follows:

Manufacturer/producer/exporter	Weighted-average margin percentage
Chunji Industrial Co., Ltd., and all related companies, including: U. Young.....	1.20
Hanil Synthetic Fiber Ind. Co. Ltd., and all related companies.....	3.17
Shinwon Tongsang and all related companies, including: Shinwon Development.....	1.11
Young Woo & Co., Ltd., and all related companies, including: Young Chang.....	0.73
Yurim Company, Ltd., and all related companies, including: Koo Ho.....	0.92
All others.....	1.30

ITC Notification

In accordance with section 735(c) of the Act, we have notified the ITC of our determination. In addition, we are making available to the ITC all nonprivileged and nonproprietary information relating to this investigation. We will allow the ITC access to all privileged and business proprietary information in our files, provided the ITC confirms that it will not disclose such information, either publicly or under administrative protective order, without the written consent of the Deputy Assistant Secretary for Investigations, Import Administration.

If the ITC determines that material injury, or threat of material injury, does not exist with respect to the product under investigation, the applicable proceeding will be terminated and all securities posted as a result of the suspension of liquidation will be refunded or cancelled.

However, if the ITC determines that such injury does exist, the Department will issue an antidumping duty order

directing Customs officials to assess antidumping duties on MMF sweaters from Korea entered or withdrawn from warehouse, for consumption, on or after the effective date of the suspension of liquidation, equal to the amount by which the foreign market value exceeds the United States price.

This determination is published pursuant to section 735(d) of the Act.

Dated: August 2, 1990.

Eric I. Garfinkel,

Assistant Secretary for Import Administration.

[FR Doc. 90-18753 filed 8-9-90; 8:45 am]

BILLING CODE 3510-DS-M

[C-201-406]

Fabricated Automotive Glass From Mexico; Initiation and Preliminary Results of Changed Circumstances Countervailing Duty Administrative Review and Intent To Revoke Countervailing Duty Order

AGENCY: International Trade Administration/Import Administration, Commerce.

ACTION: Notice of initiation and preliminary results of changed circumstances countervailing duty administrative review and intent to revoke countervailing duty order.

SUMMARY: The Department of Commerce has received information sufficient to warrant initiation of a changed circumstances administrative review of the countervailing duty order on fabricated automotive glass from Mexico. Based on this information, we preliminarily determine that the U.S. fabricated automotive glass industry would not be materially injured or threatened with material injury if the countervailing duty order on fabricated automotive glass from Mexico were revoked. Therefore, we intend to revoke this countervailing duty order. We invite interested parties to comment on these preliminary results and intent to revoke.

EFFECTIVE DATE: August 24, 1986.

FOR FURTHER INFORMATION CONTACT: Christopher Beach or Maria MacKay, Office of Countervailing Compliance, International Trade Administration, U.S. Department of Commerce, Washington, DC, 20230; telephone: (202) 377-2786.

SUPPLEMENTARY INFORMATION:

Background

On January 14, 1985, the Department of Commerce (the Department) published in the **Federal Register** (50 FR 1906) a notice of final affirmative countervailing duty determination and

countervailing duty order on fabricated automotive glass from Mexico. At the time the countervailing duty order was issued, Mexico was not entitled to an injury test under U.S. and international law. Countervailing duties were imposed upon this merchandise, which was and remains duty free, without a determination that these entries were injuring the relevant domestic industry.

On August 24, 1986, Mexico acceded to the General Agreement on Tariffs and Trade (GATT). Consistent with our earlier positions in *Certain Fasteners from India; Final Results of Administrative Review and Partial Revocation of Countervailing Duty Order* (47 FR 44129; October 6, 1982) and *Carbon Steel Wire Rod from Trinidad and Tobago; Preliminary Results of Administrative Review and Tentative Determination to Revoke Countervailing Duty Order* (50 FR 19561; May 9, 1985), the Department has concluded that it lacks the authority under Article VI of the GATT and section 303(a)(2) of the Tariff Act of 1930, as amended (the Tariff Act), to levy countervailing duties on duty-free imports from Mexico entered on or after August 24, 1986, absent a determination regarding injury to the domestic industry.

On December 19, 1989, in order to fulfill our international obligations, the United States Trade Representative (USTR) requested that the U.S. International Trade Commission (ITC) conduct an investigation pursuant to section 332 of the Tariff Act to assess whether (1) an industry in the United States would be materially injured, or would be threatened with material injury, or (2) the establishment of an industry in the United States would be materially retarded, if the Department were to revoke the outstanding countervailing duty order on fabricated automotive glass from Mexico. On May 18, 1990, the ITC submitted to USTR its report on the "Conditions of Competition Between U.S. and Mexican Fabricated Automotive Glass in the United States Market" (Investigation NO. 332-286).

Scope of Review

Imports covered by this review are shipments of Mexican fabricated automotive glass, including tempered and laminated automotive glass. Through 1988, such merchandise was classifiable under items 544.3100 and 544.4120 of the *Tariff Schedules of the United States Annotated*. This merchandise is currently classifiable under item numbers 7007.11.00, 7007.19.00, 7007.21.10 and 7007.21.50 of the *Harmonized Tariff Schedule (HTS)*. The TSUSA and HTS item numbers are

provided for convenience and Customs purposes. The written description remains dispositive.

Initiation, Preliminary Results of Review and Intent to Revoke

The Government of Mexico's accession to the GATT, the international obligations that we incurred which require an affirmative determination of injury to a domestic industry prior to levying countervailing duties on duty-free imports of fabricated automotive glass from Mexico, and the ITC's investigation of "The Conditions of Competition Between U.S. and Mexican Fabricated Automotive Glass in the United States Market" are changed circumstances sufficient to warrant initiation of a review. Further, because of our international obligations and the information in the ITC's report, we conclude that expedited action is warranted and are combining the notices of initiation and preliminary results of changed circumstances administrative review.

As a result of our review of the record developed in the ITC's investigation, we preliminarily determine that the United States fabricated automotive glass industry would not be materially injured or threatened with material injury, nor would the establishment of an industry be materially retarded, by reason of imports of fabricated automotive glass from Mexico if the countervailing duty order covering those imports were revoked. For this reason, and in view of our international obligations not to levy countervailing duties on duty-free imports from GATT-member countries in the absence of an affirmative injury determination, we preliminarily determine that there is a reasonable basis to believe that the requirements for revocation based on changed circumstances are met.

Therefore, we intend to revoke the countervailing duty order on fabricated automotive glass from Mexico effective August 24, 1986. The current requirements for the cash deposit of estimated countervailing duties will remain in effect until publication of the final results of this review.

Parties to the proceeding may request disclosure and interested parties may request a hearing not later than 10 days after date of publication of this notice. Interested parties may submit written arguments in case briefs on these preliminary results within 30 days of the date of publication. Rebuttal briefs, limited to arguments raised in case briefs, may be submitted seven days after the time limit for filing the case brief. Any hearing, if requested, will be held seven days after the scheduled date

for submission of rebuttal briefs. Copies of case briefs and rebuttal briefs must be served on interested parties in accordance with 19 CFR 355.38(e). The Department will publish the final results of the review and its decision on revocation, including the results of its analysis of issues raised in any case or rebuttal brief or at a hearing.

This initiation of review, administrative review, intent to revoke and notice are in accordance with sections 751 (b) and (c) of the Tariff Act (19 U.S.C. 1675 (b) and (c)) and 19 CFR 355.22 (h)(1) and (h)(4) and 355.25 (d)(1) and (d)(3).

Dated: August 2, 1990.

Eric I. Garfinkel,

Assistant Secretary for Import Administration.

[FR Doc. 90-18754 Filed 8-9-90; 8:45 am]

BILLING CODE 3510-05-M

NOAA-National Ocean Service; Consolidated Decision on Applications for Duty-Free Entry of Scientific Instruments

This is a decision consolidated pursuant to Section 6(c) of the Educational, Scientific, and Cultural Materials Importation Act of 1966 (Public Law 89-651, 80 Stat. 897; 15 CFR 301). Related records can be viewed between 8:30 a.m. and 5 p.m. in Room 2841, U.S. Department of Commerce, 14th and Constitution Avenue, NW., Washington, DC.

Comments: None received. *Decision:* Approved. No instrument of equivalent scientific value to the foreign instruments described below, for such purposes as each is intended to be used, is being manufactured in the United States.

Docket number: 90-041. *Applicant:* NOAA, National Ocean Service, Rockville, MD 20852. *Instrument:* Optical Controller Analytical stereoplotter System, Model AS-11PA-3. *Manufacturer:* Ottico Meccanica Italiana, Italy. *Intended Use:* See notice at 55 FR 14334, April 17, 1990. *Reasons:* The foreign apparatus enables measurement and collection of topographic survey data.

Docket number: 90-043. *Applicant:* University of Denver, Denver, CO 80202. *Instrument:* FTIR spectrometer, Model DA3. *Manufacturer:* Bomen, Inc., Canada. *Intended use:* See notice at 55 FR 14335, April 17, 1990. *Reasons:* The foreign instrument provides an unapodized resolution of 0.0026cm^{-1} .

Docket number: 90-047. *Applicant:* U.S. Army Materials Technology Laboratory, Watertown, MA 02179.

Instrument: Laser Induced Mass Analyzer System, Model CONCEPT. **Manufacturer:** Kratos Analytical, Inc. United Kingdom. **Intended use:** See notice at 55 FR 14335, April 17, 1990.

Reasons: The foreign instrument provides ultrahigh vacuum operation in conjunction with sample temperature > 2000°C through laser heating.

Docket number: 90-066. **Applicant:** University of Delaware, Newark, DE 19716. **Instrument:** Surface Forces Apparatus, Model MK II PI. **Manufacturer:** Anutech Pty, Ltd., Australia. **Intended use:** See notice at 55 FR 18366, May 2, 1990. **Reasons:** The foreign instrument can measure forces between surfaces with a sensitivity of 10 nonometers and a distance resolution of 0.1 nanometer.

Docket number: 90-068. **Applicant:** Virginia Polytechnic Institute & State University, Blacksburg, VA 24061. **Instrument:** Mass Spectrometer, Model VG Sector 54. **Manufacturer:** VG Isotech, United Kingdom. **Intended use:** See notice at 55 FR 18367, May 2, 1990. **Reasons:** The foreign instrument provides precise automated isotopic and elemental analysis of both positive and negative ions.

Docket number: 90-077. **Applicant:** University of California, San Diego, CA 92121. **Instrument:** Mass Spectrometer, Model 252. **Manufacturer:** Finnigan, MAT, West Germany. **Intended use:** See notice at 55 FR 20503, May 17, 1990. **Reasons:** The foreign instrument provides precise automated analysis of samples with an internal precision of 0.006°/oo for a 10 bar μ 1 sample of SO₂.

Docket number: 90-083. **Applicant:** University of California, San Diego, CA 92121. **Instrument:** ICP Mass Spectrometer, Model PQ2. **Manufacturer:** VG Elemental, United Kingdom. **Intended use:** See notice at 55 FR 21420, May 24, 1990. The foreign instrument provides the ability to determine major, minor, trace and ultratrace components during the analytical run without beam attenuation.

The capability of each of the foreign instruments described above is pertinent to each applicant's intended purposes. We know of no instrument or apparatus being manufactured in the United States which is of equivalent scientific value to any of the foreign instruments.

Frank W. Creel,

Director, Statutory Import Programs Staff.

[FR Doc. 90-18755 Filed 8-9-90; 8:45 am]

BILLING CODE 3510-DS-M

Syracuse University; Decision on Application for Duty-Free Entry of Scientific Instrument

This decision is made pursuant to section 6(c) of the Educational, Scientific, and Cultural Materials Importation Act of 1966 (Public Law 89-651), 80 Stat. 897; 15 CFR 301. Related records can be viewed between 8:30 a.m. and 5 p.m. in Room 2841, U.S. Department of Commerce, 14th and Constitution Avenue, NW., Washington, DC.

Docket Number: 90-042. **Applicant:** Syracuse University, Syracuse, NY 13244-1070. **Instrument:** Mass Spectrometer, Model VG Sector 54. **Manufacturer:** VG Isotopes, Ltd., United Kingdom. **Intended Use:** See notice at 55 FR 14335, April 17, 1990.

Comments: None received. **Decision:** Approved. No domestic manufacturer was both "able and willing" to manufacture an instrument or apparatus of equivalent scientific value to the foreign instrument for such purposes as the instrument was intended to be used, and have it available to the applicant without unreasonable delay in accordance with subsection 301.5(d)(2) of the regulations, at the time the foreign instrument was ordered (December 14, 1989). **Reasons:** The foreign instrument provides a precise automated multiple collector system. This capability is pertinent to the applicant's intended purposes. We know of no domestic manufacturer both able and willing to provide an instrument with the required features at the time the foreign instrument was ordered.

As to the domestic availability of instruments, subsection 301.5(d)(2) of the regulations provides that, in determining whether a U.S. manufacturer is able and willing to produce an instrument, and have it available without reasonable delay, "the normal commercial practices applicable to the production and delivery of instruments of the same general category shall be taken into account, as well as other factors which in the Director's judgment are reasonable to take into account under the circumstances of a particular case." This subsection also provides that, if "a domestic manufacturer was formally requested to bid an instrument, without reference to cost limitations and within a leadtime considered reasonable for the category of instrument involved, and the domestic manufacturer failed formally to respond to the request, for the purposes of this section the domestic manufacturer would not be considered willing to have supplied the instrument.

The regulations require that domestic manufacturers be both "able and

willing" to produce an instrument for the purposes of comparison with the foreign instrument. Where an applicant, as in this case, received no response to a formal request for quotation sent to the only known domestic manufacturer, it is apparent that the domestic manufacturer was either not able or not willing to produce an instrument of equivalent scientific value to the foreign instrument for such purposes as the foreign instrument was intended to be used at the time the foreign instrument was ordered.

Frank W. Creel,

Director, Statutory Import Programs Staff.

[FR Doc. 90-18756 Filed 8-9-90; 8:45 am]

BILLING CODE 3510-DS-M

University of California, Davis; Decision on Application for Duty-Free Entry of Scientific Instrument

This decision is made pursuant to section 6(c) of the Educational, Scientific, and Cultural Materials Importation Act of 1966 (Pub. L. 89-651), 80 Stat. 897; 15 CFR 301. Related records can be viewed between 8:30 a.m. and 5 p.m. in room 2841, U.S. Department of Commerce, 14th and Constitution Avenue NW., Washington, DC.

Docket number: 90-058. **Applicant:** University of California, Davis, Davis, CA 95616. **Instrument:** IR Detector (MCT), Model IMH06 for Existing FTIR Machine. **Manufacturer:** Bomem, Inc., Canada. **Intended use:** See notice at 55 FR 18367, May 2, 1990.

Comments: None received. **Decision:** Approved. No instrument of equivalent scientific value to the foreign instrument, for such purposes as it is intended to be used, is being manufactured in the United States. **Reasons:** This is a compatible accessory for an instrument previously imported for the use of the applicant. The instrument and accessory were made by the same manufacturer.

This accessory is pertinent to the intended uses and we know of no domestic accessory which can be readily adapted to the instrument.

Frank W. Creel,

Director, Statutory Import Program Staff.

[FR Doc. 90-18757 Filed 8-9-90; 8:45 am]

BILLING CODE 3510-DS-M

University of Miami, et al.; Applications for Duty-Free Entry of Scientific Instruments

Pursuant to section 6(c) of the Educational, Scientific and Cultural

Materials Importation Act of 1966 (Public Law 89-651; 80 Stat. 897; 15 CFR 301), we invite comments on the question of whether instruments of equivalent scientific value, for the purposes for which the instruments shown below are intended to be used, are being manufactured in the United States.

Comments must comply with subsections 301.5(a) (3) and (4) of the regulations and be filed within 20 days with the Statutory Import Programs Staff, U.S. Department of Commerce, Washington, DC 20230. Applications may be examined between 8:30 a.m. and 5 p.m. in Room 2841, U.S. Department of Commerce, 14th and Constitution Avenue, NW., Washington, DC.

Docket number: 90-116. Applicant: University of Miami, Department of Civil and Architectural Engineering, P.O. Box 248294, Coral Gables, FL 33124. **Instrument:** Digital Controller and Hall Effect Transducer Set with Accessories and DTI.

Manufacturer: GDS Instruments, Ltd., United Kingdom. **Intended use:** The instrument will be used for studies of the strength and deformation characteristics and failure mechanisms as a function of effective stresses, time and stress history of soil under static and dynamic loads. **Application received by Commissioner of Customs:** June 29, 1990.

Docket number: 90-117. Applicant: National Institute of Standards and Technology, Clapper Road & Quince Orchard Road, Gaithersburg, MD 20899. **Instrument:** Velocity Selector for Small Angle Neutron Scattering Instrument, Model MDR 9-410-420. **Manufacturer:** Translektro, Hungary. **Intended use:** The instrument will be used in investigations to relate the microstructural features of new materials as determined by small angle neutron scattering (SANS). **Application received by Commissioner of Customs:** June 29, 1990.

Docket number: 90-118. Applicant: Research Foundation of the State University of New York, Stony Brook, NY 11794. **Instrument:** Electron Microscope, Model JEM 1200EXII. **Manufacturer:** JEOL, Ltd., Japan. **Intended use:** The instrument will be used primarily to study the structure and organization of nerve cells in the spinal cord, brain and retina. The overall objective of the research projects is to understand the manner in which nerve cells of differing structural and chemical types interact to produce the behaviors which are so familiar, for example walking, eye-hand coordination, cardiovascular function, color vision, perception of stationary and moving

objects. **Application received by Commissioner of Customs:** July 2, 1990.

Docket number: 90-119. Applicant: University of Illinois at Urbana-Champaign, Purchasing Division, 506 South Wright Street, Urbana, IL 61801. **Instrument:** Epitaxial Growth Reactor. **Manufacturer:** Thomas Swan and Co., United Kingdom. **Intended use:** The instrument will be used to study electrical and optical phenomena of crystals of various combinations of gallium, aluminum, arsenic, indium, phosphorus, silicon and zinc. **Application received by Commissioner of Customs:** July 2, 1990.

Docket number: 90-120. Applicant: Pennsylvania State University, 217 Tyson Building, University Park, PA 16802. **Instrument:** Modulated Chlorophyll Fluorescence Measuring System. **Manufacturer:** Heinz Walz GmbH, West Germany. **Intended use:** The instrument will be used for studies of chlorophyll fluorescence from photosynthetically active plant tissues. Chlorophyll fluorescence is a powerful, non-intrusive indication of the status of photosynthetic systems and is particularly useful for studying the effects of environmental stress in plants. **Application received by Commissioner of Customs:** July 2, 1990.

Docket number: 90-121. Applicant: House Ear Institute, 256 S. Lake Street, Los Angeles, CA 90057. **Instrument:** Electron Microscope, Model EM 902 PC/ST. **Manufacturer:** Carl Zeiss, West Germany. **Intended use:** The instrument will be used to examine the organs of hearing and balance (ears) and brain of humans. Electron energy spectrometry will be used to analyze the distribution of the major cations in vestibular and cochlear hair cells (calcium, zinc, iron, copper, sodium) to determine if these are associated with human disorders. The objectives of this research is to determine what the relationships are between cell ultrastructural anatomy, the metabolism of inorganic elements and human pathology. **Application received by Commissioner of Customs:** July 5, 1990.

Docket number: 90-122. Applicant: Scripps Clinic and Research Foundation, Research Institute of Scripps Clinic, 10666 North Torrey Pines Road, La Jolla, CA 92037. **Instrument:** Mass Spectrometer, Model ZAB 2VSE. **Manufacturer:** VG Instruments, United Kingdom. **Intended use:** The instrument will be used for research in the chemical and biological sciences; particularly structural, synthetic and bioorganic chemistry. A large proportion of the samples will be of high molecular weight up to 15,000 amu (e.g., complex natural products and intermediates,

oligosaccharides, peptides and oligonucleotides) for which molecular ion detection and exact mass determination and other structural information will be required.

Application received by Commissioner of Customs: July 5, 1990.

Docket number: 90-123. Applicant: Cornell University, Department of Soil, Crop and Atmospheric Sciences, 917 Bradfield Hall, Ithaca, NY 14853. **Instrument:** Dry Combustion CN Analyser Coupled to Isotope Ratio Mass Spectrometer. **Manufacturer:** Europa Scientific, United Kingdom. **Intended use:** The instrument will be used for investigation of the $^{15}\text{N}/^{14}\text{N}$ and $^{13}\text{C}/^{12}\text{C}$ ratios of soil, plant, water and gas samples. The various research projects will include the following:

- (1) Basic studies of soil nitrogen transformations and dynamics,
- (2) Dynamics of soil organic matter,
- (3) Interactions between planktonic community structure and nutrient cycling processes in freshwater ecosystems,
- (4) Molybdenum availability and the control of nitrogen fixation in aquatic ecosystems, and
- (5) Use of ^{13}C to estimate root growth and respiration and leaf carbon isotope ratios to determine changes in water-use efficiency of plants subjected to environmental stress.

Application received by Commissioner of Customs: July 5, 1990.

Docket Number: 90-124. Applicant: Research Foundation of State University of New York, Stony Brook, NY 11794. **Mass Spectrometer, Model 262V. Manufacturer:** Finnigan MAT, West Germany. **Intended use:** The instrument will be used for measuring the isotope ratios of Nd, Sr, Pb and B in a wide range of rocks and minerals. The experiments will consist of studies in a variety of geologic terranes in which the isotope data will be used to characterize the sources of rocks or minerals or to date precisely the time of their formation or closure to migrations of elements within the given isotope system. In addition, the instrument will be used for educational purposes in the courses GEO 599 Research and GEO 699 Dissertation Research. **Application received by commissioner of customs:** July 6, 1990.

Docket Number: 90-125. Applicant: University of Wisconsin—Stevens Point, Department of Biology, 2100 Main Street, Stevens Point, WI 54481. **Instrument:** Three (3) oxygen Meter/Electrode Systems. **Manufacturer:** Strathkelvin Instruments, United Kingdom. **Intended use:** The instrument will be used to study respiration rates (oxygen uptake

rates) of parasitic organisms (e.g. *Miracidia* of the fluke *Cyclocoelum ocaleum*) in the presence or absence of exogenous substrates (e.g. succinate). The instrument will also be used in physiology and cell biology courses to teach undergraduate students how to employ oxygen polarography as a technique to measure respiratory oxygen uptake rates by mitochondria and oxygen evolution rates by chloroplasts in photosynthesis and O_2 utilization by ciliated/flagellated organisms.

Application received by commissioner of customs: July 6, 1990.

Docket Number: 90-126. *Applicant:* Argonne National Laboratory, 9700 South Cass Avenue, Argonne, IL 60439. *Instrument:* Electron Spectrometer, Version III. *Manufacturer:* Applied Laser Technology, The Netherlands. *Intended use:* The instrument will be used to study multiphoton ionization of polyatomic molecules in a supersonic expansion. The objective of the studies is to develop ultrasensitive detection techniques for molecules, e.g. air pollutants and to gain basic understanding of excited states of molecules. *Application received by commissioner of customs:* July 10, 1990.

Docket Number: 90-127. *Applicant:* Lamont-Doherty Geological Observatory of Columbia University, Route 9W, Palisades, NY 10964. *Instrument:* Mass Spectrometer, Model Sector 54. *Manufacturer:* VG Isotech, United Kingdom. *Intended use:* The instrument will be used for analysis of isotopic ratios of elements in natural materials. Experiments will consist of measurement of abundance of naturally-occurring radiogenic and non-radiogenic isotopes and enriched-isotope spikes added to natural samples for determination of element concentrations using stable-isotope dilution techniques. *Application received by commissioner of customs:* July 12, 1990.

Docket Number: 90-128. *Applicant:* Argonne National Laboratory, 9700 South Cass Avenue, Argonne, IL 60439. *Instrument:* Multipole Magnet Measurement System. *Manufacturer:* Danfysik, Denmark. *Intended use:* The instrument will be used to determine the magnetic field quality of quadrupole magnets in order to meet the machine parameters and the schedule of the Advanced Photo Source Project. *Application received by commissioner of customs:* July 11, 1990.

Docket Number: 90-129. *Applicant:* University of Michigan, Department of Material Sciences and Engineering, 2300 Hayward Street, Ann Arbor, MI 48109-2136. *Instrument:* Electron Microscope (used), Model EM420. *Manufacturer:* N.V. Philips Electronics, The

Netherlands. *Intended use:* The instrument will be used for the investigation of microstructures and microchemistries of alloys, ceramics, semiconductors, superconductors and polymers and how they relate to the macroscopic properties (e.g. ductility, toughness, electrical conductivity). Experiments will be phase analyses by electron diffraction and x-ray spectroscopy, dislocation analyses by image and diffraction studies and interfacial chemical analysis by x-ray spectroscopy. In addition, the instrument will be used for educational purposes in the courses MSE (Materials Science and Engineering) 356 Materials Lab I, MSE 456 Materials Lab II, MSE 562 Electron Microscopy I and MSE 662 Electron Microscopy II. *Application received by commissioner of customs:* July 11, 1990.

Docket Number: 90-130. *Applicant:* University of Illinois at Urbana-Champaign, Purchasing Division, 506 South Wright Street, Urbana, IL 61801. *Instrument:* Universal Crystal Growth System, Model MCGS05. *Manufacturer:* Crystallox, United Kingdom. *Intended use:* The instrument will be used in a comprehensive interdisciplinary program of basic research of displacive transformations in ceramics with the ultimate aim being to raise the level of understanding of these transformations in metallic systems. *Application received by commissioner of customs:* July 12, 1990.

Docket Number: 90-131. *Applicant:* National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, 9000 Rockville Pike, Bethesda, MD 20892. *Instrument:* Gas Chromatograph Mass Spectrometer, Model JMS-SX102. *Manufacturer:* JEOL, Japan. *Intended use:* The instrument will be used for separation and structural determination of biologically active compounds which have been isolated from biological sources. The compounds vary from small to large molecular weight molecules. Samples will be analyzed on the solids probe if stable, on the direct exposure probe if temperature sensitive or of medium molecular weight or if polar compounds are to be analyzed, and on the FAB probe when high molecular weight compounds are involved. *Application received by commissioner of customs:* July 15, 1990.

Docket Number: 90-132. *Applicant:* University of Idaho, Moscow, ID 83843. *Instrument:* Electron Energy Spectrometer, Model 7002. *Manufacturer:* Applied Laser Technology, The Netherlands. *Intended use:* The instrument will be used to study multiphoton ionization processes in alkali elements (Rb and/or Cs) and

group II elements (Ca, Sr, Ba, Hg). There are also plans to use it in a multiphoton ionization scheme which may have applications for isotopically separating ^{199}Hg . Both cases will involve studying resonant ionization schemes with the basic research goal of understanding how the remaining ionic core of electrons influences the behavior of the ionization process. *Application received by commissioner of customs:* July 16, 1990.

Docket Number: 90-133. *Applicant:* Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, MA 02139. *Instrument:* Electron Microscope, Model JEM 1200 EXII. *Manufacturer:* JEOL Ltd., Japan. *Intended use:* The instrument will be used to carry out various research objectives which include but are not limited to the following:

(1) Identify structural intermediates in icosahedral shell assembly by direct visualization during the in vitro assembly reaction;

(2) Characterize unassembled subunits and mutant forms of the 90kda protein which forms the dodecameric portal through which DNA is packaged into the viral capsid;

(3) Determine how the binding of the anti-cancer agent cisplatin alters the conformation of the target DNA;

(4) Determine the conformation of the DNA/cisplatin complex specifically recognized by a mammalian cell protein which may repair or excise such complexes;

(5) Determine whether the 80kd chartin protein found only in neural cells is specifically associated with neuronal microtubules using immuno-electron microscopy;

(6) Determine the morphology of microtubules formed from mutant yeast tubulin subunits; and

(7) Determine the defect in organelle assembly or ultrastructure generated by mutants unable to carry out endocytosis by the LDL receptor.

Application received by Commissioner of Customs: July 17, 1990.

Docket Number: 90-134. *Applicant:* Duke University, Marine Laboratory, Beaufort, NC 28516. *Instrument:* Pulse Modulation Fluorometer. *Manufacturer:* Walz, West Germany. *Intended Use:* The instrument will be used to determine the properties of the fluorescence induction curve, including the ratio of variable to maximum fluorescence and the coefficients of photochemical and non-photochemical fluorescence quenching. A wide variety of experiments will be conducted, including steady-state characterization of macroalgae grown at different

irradiations, time series following transfer between irradiations, and analysis of photosynthetic response under field conditions. *Application received by Commissioner of Customs:* July 17, 1990.

Docket Number: 90-135. *Applicant:* Sloan-Kettering Institute for Cancer Research, 1275 York Avenue, New York, NY 10021. *Instrument:* Electron Microscope, Model JEM 1200EX/SEG/DP/DP. *Manufacturer:* JEOL Ltd., Japan. *Intended Use:* The instrument will be used for experiments involving the use of immunogold localization of specific purified proteins as functions of time of fork movement; analysis of recombination intermediates and the localization of specific transcription factors and topoisomerases during transcription or replication; study of the internalization of molecules on normal and tumor cells; studies of the structure and function of the genes termed proto-oncogenes. In addition, the instrument will be used for training graduate students and postdoctoral fellows. *Application received by Commissioner of Customs:* July 17, 1990.

Frank W. Creel,
Director, Statutory Import Programs Staff.
[FR Doc. 90-18763 Filed 8-9-90; 8:45 am]
BILLING CODE 3510-DS-M

University of Minnesota; Decision on Application for Duty-Free Entry of Scientific Instruments

This decision is made pursuant to section 6(c) of the Educational, Scientific, and Cultural Materials Importation Act of 1966 (Public Law 89-651, 80 Stat. 897; 15 CFR 301). Related records can be viewed between 8:30 a.m. and 5 p.m. in room 2841, U.S. Department of Commerce, 14th and Constitution Avenue, NW., Washington, DC.

Docket Number: 90-067. *Applicant:* University of Minnesota, Minneapolis, MN 55455. *Instrument:* Mass Spectrometer, Model API III. *Manufacturer:* Sciex, Canada. *Intended Use:* See notice at 55 FR 18366, May 2, 1990.

Comments: None received. *Decision:* Approved. No instrument or apparatus of equivalent scientific value to the foreign instrument, for such purposes as it is intended to be used, was being manufactured in the United States at the time the instrument was ordered (November 11, 1989). *Reasons:* The foreign instrument provides: (1) atmospheric pressure ionization, (2) flow rates to 200 μ l per minute, (3) stable negative ion formation and (4) FAB capability.

The National Institutes of Health advises in its memorandum dated June 26, 1990 that (1) this capability is pertinent to the applicant's intended purposes and (2) it knows of no domestic instrument or apparatus of equivalent scientific value to the foreign instrument for the applicant's intended use being manufactured at the time the foreign instrument was ordered.

We know of no other instrument or apparatus of equivalent scientific value to the foreign instrument which was being manufactured in the United States at the time it was ordered.

Frank W. Creel,
Director, Statutory Import Programs Staff.
[FR Doc. 90-18758 Filed 8-9-90; 8:45 am]
BILLING CODE 3510-DS-M

Minority Business Development Agency

Business Development Center Applications; Atlanta, GA

AGENCY: Minority Business Development Agency, Commerce.
ACTION: Notice.

SUMMARY: In accordance with the provisions of Executive Order 11625, the Minority Business Development Agency (MBDA) announces that it is soliciting competitive applications under its Minority Business Development Center (MBDC) Program to operate an MBDC for a 3-year period, subject to available funds. The cost of performance for the first 12 months is estimated at \$340,000 for the project performance of 01/1/91 to 12/31/91. The MBDC will operate in the Atlanta, Georgia, Metropolitan Statistical Area (MSA). The first year cost for the MBDC will consist of \$289,000 in Federal Funds and a minimum of \$51,000 in non-Federal funds (which can be a combination of cash, in-kind contribution and fees for services).

The funding instrument for the MBDC will be a cooperative agreement and competition is open to individuals, non-profit and for-profit organizations, local and state governments, American Indian tribes and educational institutions.

The MBDC will provide management and technical assistance to eligible clients for the establishment and operation of businesses. The MBDC program is designed to assist those minority businesses that have the highest potential for success. In order to accomplish this, MBDA supports MBDC programs that can: coordinate and broker public and private sector resources on behalf of minority individuals and firms; offer them a full

range of management and technical assistance; and serve as a conduit of information and assistance regarding minority business.

Applications will be judged on the experience and capability of the firm and its staff in addressing the needs of minority business individuals and organizations (50 points); the resources available to the firm in providing management and technical assistance (10 points); the firm's proposed approach to performing the work requirements included in the application (20 points); and the firm's estimated cost for providing such assistance (20 points). It is advisable that applicants have an existing office in the geographic region for which they are applying.

An applicant must receive at least 70% of the points assigned to each evaluation criteria category to be considered programmatically acceptable and responsive.

The MBDC will operate for a 3-year period with periodic reviews culminating in annual evaluations to determine if funding for the project should continue. Continued funding will be at the discretion of MBDA based on such factors as an MBDC's satisfactory performance, the availability of funds, and Agency priorities.

Applicants who have an outstanding account receivable with the Federal Government may not be considered for funding until these debts have been paid or arrangements satisfactory to the Federal Government are made to pay the debt.

Applicants are subject to Governmentwide Debarment and Suspension (Nonprocurement) requirements as stated in 15 CFR Part 26. In accordance with the Drug-Free Workplace Act of 1988, each applicant must make the appropriate certification as a "prior condition" to receiving a grant or cooperative agreement.

Awards under this program shall be subject to all Federal Departmental regulations, policies, and procedures applicable to Federal assistance awards. A false statement on an application may be grounds for denial or termination of funds and grounds for possible punishment by a fine or imprisonment.

Section 319 of Public Law 101-121 generally prohibits recipients of appropriated funds from lobbying the Executive or Legislative Branches of Federal Government in connection with a specific contract, grant, or loan. A "Certification for Contractors, Grants Loans, and Cooperative Agreements" and the SF-LLL, "Disclosure of Lobbying Activities" (if applicable), is required.

Closing Date: The closing date for applications is *September 17, 1990*. Applications must be postmarked on or before *September 17, 1990*. The anticipated processing time is 120 days.

ADDRESS: Atlanta Regional Office, Minority Business Development Agency, U.S. Department of Commerce, Suite 505, Atlanta, Georgia 30309, 404/347-4091.

FOR FURTHER INFORMATION CONTACT: Carlton L. Eccles, Regional Director of the Atlanta Regional Office.

SUPPLEMENTARY INFORMATION:

Questions concerning the preceding information, copies of application kits and applicable regulations can be obtained at the above address.

(11.800 Minority Business Development, Catalog of Federal Domestic Assistance)

Note.—A pre-application conference to assist all interested applicants will be held at the U.S. Department of Commerce, Minority Business Development Agency, 1371 Peachtree Street, NE, Suite 505, Atlanta, Georgia, August 29, 1990, at 9 a.m.

Dated: August 3, 1990.

Carlton L. Eccles,
Regional Director, Atlanta Regional Office.
[FR Doc. 90-18806 Filed 8-9-90; 8:45 am]

BILLING CODE 3510-21-M

Business Development Center Applications; Louisville, KY

AGENCY: Minority Business Development Agency, Commerce.

ACTION: Notice.

SUMMARY: In accordance with the provisions of Executive Order 11625, the Minority Business Development Agency (MBDA) announces that it is soliciting competitive applications under its Minority Business Development Center (MBDC) Program to operate an MBDC for a 3-year period, subject to available funds. The cost of performance for the first 12 months is estimated at \$204,000 for the project performance of 01/1/91 to 12/31/91. The MBDC will operate in the Louisville, Kentucky, Metropolitan Statistical Area (MSA). The first year cost for the MBDC will consist of \$173,400 in Federal Funds and a minimum of \$30,600 in non-Federal funds (which can be a combination of cash, in-kind contribution and fees for services).

The funding instrument for the MBDC will be a cooperative agreement and competition is open to individuals, non-profit and for-profit organizations, local and state governments, American Indian tribes and educational institutions.

The MBDC will provide management and technical assistance to eligible

clients for the establishment and operation of businesses. The MBDC program is designed to assist those minority businesses that have the highest potential for success. In order to accomplish this, MBDA supports MBDC programs that can: coordinate and broker public and private sector resources on behalf of minority individuals and firms; offer them a full range of management and technical assistance; and serve as a conduit of information and assistance regarding minority business.

Applications will be judged on the experience and capability of the firm and its staff in addressing the needs of minority business individuals and organizations (50 points); the resources available to the firm in providing management and technical assistance (10 points); the firm's proposed approach to performing the work requirements included in the application (20 points); and the firm's estimated cost for providing such assistance (20 points). It is advisable that applicants have an existing office in the geographic region for which they are applying.

An applicant must receive at least 70% of the points assigned to reach evaluation criteria category to be considered programmatically acceptable and responsive.

The MBDC will operate for a 3-year period with periodic reviews culminating in annual evaluations to determine if funding for the project should continue. Continued funding will be at the discretion of MBDA based on such factors as an MBDC's satisfactory performance, the availability of funds, and Agency priorities.

Applicants who have an outstanding account receivable with the Federal Government may not be considered for funding until these debts have been paid or arrangements satisfactory to the Federal Government are made to pay the debt.

Applicants are subject to Governmentwide Debarment and Suspension (Nonprocurement) requirements as stated in 15 CFR Part 26. In accordance with the Drug-Free Workplace Act of 1988, each applicant must make the appropriate certification as a "prior condition" to receiving a grant or cooperative agreement.

Awards under this program shall be subject to all Federal Departmental regulations, policies, and procedures applicable to Federal assistance awards.

A false statement on an application may be grounds for denial or termination of funds and grounds for possible punishment by a fine or imprisonment.

Section 319 of Public Law 101-121 generally prohibits recipients of appropriated funds from lobbying the Executive or Legislative Branches of Federal Government in connection with a specific contract, grant, or loan. A "Certification for Contractors, Grants Loans, and Cooperative Agreements" and the SF-LLL, "Disclosure of Lobbying Activities" (if applicable), is required.

Closing Date: The closing date for applications is *September 17, 1990*. Applications must be postmarked on or before *September 17, 1990*. The anticipated processing time is 120 days.

ADDRESS: Atlanta Regional Office, Minority Business Development Agency, U.S. Department of Commerce, Suite 505, Atlanta, Georgia 30309, 404/347-4091.

FOR FURTHER INFORMATION CONTACT: Carlton L. Eccles, Regional Director of the Atlanta Regional Office.

SUPPLEMENTARY INFORMATION:

Questions concerning the preceding information, copies of application kits and applicable regulations can be obtained at the above address.

(11.800 Minority Business Development Catalog of Federal Domestic Assistance)

Note.—A pre-application conference to assist all interested applicants will be held at the U.S. Department of Commerce, Minority Business Development Agency, 1371 Peachtree Street, NE, Suite 505, Atlanta, Georgia, August 29, 1990, at 9:00 a.m.

Dated: August 3, 1990.

Carlton L. Eccles,
Regional Director, Atlanta Regional Office.
[FR Doc. 90-18807 Filed 8-9-90; 8:45 am]

BILLING CODE 3510-21-M

National Institute of Standards and Technology

[Notice 1]

National Fire Codes; Request for Comments on NFPA Technical Committee Reports

AGENCY: National Institute of Standards and Technology, DOC.

ACTION: Notice of request for comments.

SUMMARY: The National Fire Protection Association (NFPA) revises existing standards and adopts new standards twice a year. At its Fall Meeting in November or its Annual Meeting in May, the NFPA acts on recommendations made by its technical committees.

The purpose of this notice is to request comments on the technical reports which will be presented at NFPA's 1991 Annual Meeting. The

publication of this notice by the National Institute of Standards and Technology (NIST) on behalf of NFPA is being undertaken pursuant to OMB Circular A-119 to promote the voluntary standards process, and as a public service; NIST does not necessarily endorse, approve, or recommend any of the standards referenced in the notice.

DATES: The Technical Committee Reports are available for distribution on August 3, 1990. Comments received on or before October 12, 1990 will be considered by the respective NFPA Committees before final action is taken on the proposals.

ADDRESSES: The 1991 Annual Technical Committee Reports are available from NFPA, Publication Department, 1 Batterymarch Park, Quincy, Massachusetts 02269-9101. Comments on the reports should be submitted to Arthur E. Cote, P.E., Secretary, Standards Council, NFPA, 1 Batterymarch Park, Quincy, Massachusetts 02269-9101.

FOR FURTHER INFORMATION CONTACT: Arthur E. Cote, P.E., Secretary, Standards Council, at above address, (617) 770-3000.

SUPPLEMENTARY INFORMATION:

Background

Standards developed by the technical committees of the National Fire Protection Association (NFPA) have been used by various Federal Agencies as the basis for Federal regulations concerning fire safety. The NFPA standards are known collectively as the National Fire Codes. Often, the Office of the Federal Register approves the incorporation by reference of these standards under 5 U.S.C. 552(a) and 1 CFR part 51.

Revisions of existing standards and adoption of new standards are reported by the technical committees at the NFPA's Fall Meeting in November or at the Annual Meeting in May each year. The NFPA invites public comment on its Technical Committee Reports.

Request for Comments

Interested persons may participate in these revisions by submitting written data, views, or arguments to Arthur E. Cote, P.E., Secretary, Standards Council, NFPA, 1 Batterymarch Park, Quincy, Massachusetts 02269-9101. Commentors may use the forms provided for comments in the Technical Committee Reports. Each person submitting a comment should include his or her name and address, identify the notice, and give reasons for any recommendations. Comments received on or before October 12, 1990, will be considered by

the NFPA before final action is taken on the proposals.

Copies of all written comments received and the disposition of those comments by the NFPA committees will be published as the Technical Committee Documentation by March 29, 1991, prior to the Annual Meeting.

A copy of the Technical Committee Documentation will be sent automatically to each commentor. Action on the Technical Committee Reports (adoption or rejection) will be taken at the Annual Meeting, May 20-23, 1991 in Boston, Massachusetts by NFPA members.

Dated: August 7, 1990.

John W. Lyons,
Director.

1991 ANNUAL MEETING TECHNICAL COMMITTEE REPORTS

[P=Partial revision; W=Withdrawal; R=Reconfirmation; N=New; C=Complete Revision]

NFPA No.	Title	Action
1	Fire Prevention Code	C
13	Installation of Sprinkler Systems	C
13D	Installation of Sprinkler Systems in One- and Two-Family Dwellings and Mobile Homes.	P
13R	Installation of Sprinkler Systems in Residential Occupancies Up to Four Stories in Height.	P
45	Fire Protection for Laboratories Using Chemicals.	P
79	Electrical Standard for Industrial Machinery.	P
85C	Furnace Explosions/Implosions in Multiple Burner Boiler Furnaces (Combining NFPA 85B, NFPA 85D, NFPA 85E, & NFPA 85G).	C
86C	Industrial Furnaces Using Special Processing Atmosphere.	P
88A	Parking Structures	P
88B	Repair Garages	P
101M	Alternative Approaches to Life Safety.	P
224	Homes and Camps in Forest Areas.	W
263	Heat and Visible Smoke Release Rates for Materials and Products.	W
295	Wildfire Control	C
296	Air Operations for Forest, Bush and Grass Fires.	W
297	Telecommunications Systems—Principles and Practices for Rural and Forestry Services.	W
299	Protection of Life & Property from Wildfire.	N
402M	Aircraft Rescue and Fire Fighting Operational Procedures.	P
424M	Airport/Community Emergency Planning.	P
910	Protection of Libraries and library Collections.	C
911	Protection of Museums and Museum Collections.	C
1221	Public Fire Service Communications Systems.	P
1581	Fire Department Infection Control Program.	N
1914	Testing Fire Department Aerial Devices.	P

1991 ANNUAL MEETING TECHNICAL COMMITTEE REPORTS—Continued

[P=Partial revision; W=Withdrawal; R=Reconfirmation; N=New; C=Complete Revision]

NFPA No.	Title	Action
1971	Protective Clothing for Structural Fire Fighting.	C

[FR Doc. 90-18836 Filed 8-9-90; 8:45 am]

BILLING CODE 3510-13-M

[Notice 2]

National Fire Codes; Request for Proposals for Revision of Standards

AGENCY: National Institute of Standards and Technology, DOC.

ACTION: Notice of request for proposals.

SUMMARY: The National Fire Protection Association (NFPA) proposes to revise some of its fire safety standards and requests proposals from the public to amend existing NFPA fire safety standards. The purpose of this request is to increase public participation in the system used by NFPA to develop its standards. The publication of this notice of request for proposals by the National Institute of Standards and Technology (NIST) on behalf of NFPA is being undertaken pursuant to OMB Circular A-119 to promote the voluntary standards process, and as a public service; NIST does not necessarily endorse, approve, or recommend any of the standards referenced in the notice.

DATES: Interested persons may submit proposals on or before the dates listed with the standards.

ADDRESSES: Arthur E. Cote, P.E., Secretary, Standards Council, NFPA, 1 Batterymarch Park, Quincy, Massachusetts 02269-9101.

FOR FURTHER INFORMATION CONTACT: Arthur E. Cote, P.E., Secretary, Standards Council, at above address, (617) 770-3000.

SUPPLEMENTARY INFORMATION:

Background

The National Fire Protection Association (NFPA) develops fire safety standards which are known collectively as the National Fire Codes. Federal agencies frequently use these standards as the basis for developing Federal regulations concerning fire safety. Often, the Office of the Federal Register approves the incorporation by references of these standards under 5 U.S.C. 552(a) and 1 CFR part 51.

Request for Proposals

Interested persons may submit amendments, supported by written data, views, or arguments to Arthur E. Cote, P.E., Secretary, Standards Council, NFPA, 1 Batterymarch Park, Quincy, Massachusetts 02269-9101. Proposals should be submitted on forms available from the NFPA Standards Administration Office.

Each person must include his or her name and address, identify the document and give reasons for the proposal. Proposals received before or by 5 P.M. local time on the closing date indicated will be acted on by the Committee. The NFPA will consider any proposal that it receives on or before the date listed with the standard.

At a later date, each NFPA Technical Committee will issue a report which will include a copy of written proposals that have been received and an account of their disposition of each proposal by the NFPA Committee as the Technical Committee Report. Each person who has submitted a written proposal will receive a copy of the report.

Dated: August 7, 1990.

John W. Lyons,
Director.

NFPA No.	Title	Proposal closing date
12	Carbon Dioxide Extinguishing Systems.	Jan 18, 1991.
13E	Fire Department Operations in Properties Protected by Sprinkler and Standpipe Systems.	July 16, 1993.
31	Oil Burning Equipment.....	Jan 18, 1991.
32	Dry-cleaning Plants.....	Open.
33	Spray Application Using Flammable and Combustible Materials.	Open.
34	Dipping and Coating Processes Using Flammable or Combustible Liquids.	Open.
35	Manufacture of Organic Coatings.	Jan 18, 1991.
36	Solvent Extraction Plants.....	Open.
54	National Fuel Gas Code.....	Nov. 30, 1990.
65	Processing and Finishing of Aluminum.	Open.
70	National Electrical Code.....	Nov 9, 1990.
71	Central Station Signaling Systems.	Jan 18, 1991.
72	Installation, Maintenance, and Use of Protective Signaling Systems.	Jan 18, 1991.
72E	Automatic Fire Detectors.....	Jan 18, 1991.
72G	Installation, Maintenance and Use of Notification Appliances for Protective Signaling Systems.	Jan 18, 1991.
72H	Testing Procedures for Local, Auxiliary, Remote Station, and Proprietary Protective Signaling Systems.	Jan 18, 1991.
74	Household Fire Warning Equipment.	Jan 18, 1991.

NFPA No.	Title	Proposal closing date	NFPA No.	Title	Proposal closing date
75	Electronic Computer/Data Processing Equipment.	Jan 18, 1991.	498	Explosives Motor Vehicle Terminals.	Jan 18, 1991.
80	Fire Doors and Windows.....	Jan 18, 1991.	502	Limited Access Highways, Tunnels, Bridges, Elevated Roadways, and Air Right Structures.	Jan 18, 1991.
85A	Furnace Explosions in Fuel Oil- and Natural Gas-Fired Single Burner Boiler-Furnaces.	Jan 18, 1991.	651	Aluminum and Magnesium Powder.	Open.
85F	Pulverized Fuel Systems.....	Jan 18, 1991.	802	Nuclear Research Reactors.	July 19, 1991.
85H	Prevention of Combustion Hazards in Atmospheric Fluidized Bed Combustion Systems.	Jan 18, 1991.	803	Fire Protection for Light Water Nuclear Power Plants.	July 19, 1991.
85I	Stoker Operations.....	Jan 18, 1991.	820	Wastewater Treatment Plants.	July 20, 1990.
86	Ovens and Furnaces.....	Jan 15, 1993.	850	Fire Protection for Fossil Fueled Steam Electric Generating Plants.	Jan 18, 1991.
86D	Industrial Furnaces Using Vacuum as an Atmosphere.	Jan 15, 1993.	851	Fire Protection for Hydroelectric Generating Plants.	Jan 18, 1991.
91	Blower and Exhaust Systems for Dust, Stock and Vapor Removal or Conveying.	Aug 31, 1990.	903M	Property Survey Manual.....	Oct 1, 1990.
92A	Smoke Control Systems.....	Jan 18, 1991.	904M	Incident Follow-Up Report Manual.	Oct 1, 1990.
97M	Glossary of Terms Relating to Chimneys, Vents, and Heat-Producing Appliances.	Jan 31, 1991.	912	Fire Protection in Places of Worship.	Jan 18, 1991.
99	Health Care Facilities.....	July 1, 1991.	913	Protection of Historic Structures and Sites.	Jan 18, 1991.
105	Installation of Smoke and Draft Control Door Assemblies.	Jan 18, 1991.	914	Rehabilitation of Historic Buildings.	Jan 18, 1991.
110	Emergency and Standby Power Systems.	July 19, 1991.	1001	Fire Fighter Professional Qualifications.	Jan 18, 1991.
110A	Emergency and Standby Power Systems.	July 19, 1991.	1002	Fire Apparatus Driver/Operator Professional Qualifications.	Jan 24, 1992.
211	Chimneys, Fireplaces and Vents and Solid Fuel Burning Appliances.	Jan 31, 1991.	1003	Airport Fire Fighters Professional Qualifications.	July 19, 1991.
214	Water-Cooling Towers.....	Jan 18, 1991.	1021	Fire Officer Professional Qualifications.	Jan 18, 1991.
256	Fire Tests of Roof Coverings.	July 19, 1991.	1031	Fire Inspector Professional Qualifications.	July 19, 1991.
259	Potential Heat of Building Material.	July 19, 1991.	1033	Fire Investigator Professional Qualifications.	July 19, 1991.
327	Cleaning or Safeguarding Small Tanks and Container.	Jan 18, 1991.	1035	Public Fire Educator Professional Qualifications.	July 19, 1991.
328	Flammable and Combustible Liquids and Gases in Manholes, Sewers, and Similar Underground Structures.	Jan 18, 1991.	1041	Fire Service Instructor Professional Qualifications.	Jan 18, 1991.
329	Underground Leakage of Flammable and Combustible Liquids.	Jan 18, 1991.	1401	Fire Protection Training Reports and Records.	July 19, 1991.
385	Tank Vehicles for Flammable and Combustible Liquids.	Open.	1406	Outdoor Burning.....	July 19, 1991.
386	Portable Shipping Tanks for Flammable and Combustible Liquids.	Open.	1410	Initial Fire Attack.....	July 17, 1992.
395	Storage of Flammable and Combustible Liquids on Farms and Isolated Construction Projects.	Open.	1452	Training Fire Department Personnel to Make Dwelling Fire Safety Surveys.	Jan 18, 1991.
415	Aircraft Fuel Ramp Draining.	Sept 17, 1990.	1501	Fire Department Safety Officer.	Oct 26, 1990.
416	Construction and Protection of Airport Terminal Buildings.	Sept 17, 1990.	1972	Helmets for Structural Fire Fighting.	Nov 9, 1990.
419	Master Planning Airport Water Supply Systems for Fire Protection.	Sept 17, 1990.	1974	Protective Footwear for Structural Fire Fighting.	Nov 9, 1990.
480	Storage, Handling and Processing of Magnesium.	Open.	1976	Proximity Protective Clothing for Fire Fighters.	Aug 31, 1990.
481	Titanium.....	Open.	1981	Open-Circuit Self-Contained Breathing Apparatus for Fire Fighters.	Nov 9, 1990.
482	Zirconium.....	Open.	1984	Closed-Circuit SCBA for Fire Fighters.	Nov 9, 1990.
495	Explosive Materials.....	Jan 18, 1991.			

[FR Doc. 90-18837 Filed 8-9-90; 8:45 am]

BILLING CODE 3510-37-M

National Oceanic and Atmospheric Administration

[Docket No. 900665-0165]

Notice To Adopt Standard Method for Mathematical Horizontal Datum Transformation**AGENCY:** National Oceanic and Atmospheric Administration, Commerce.**ACTION:** Notice.

SUMMARY: The purpose of this notice is to announce a decision by the Federal Geodetic Control Committee (FGCC) to recommend adoption of a standard method for mathematical transformations between the horizontal geodetic datums: the North American Datum of 1927 (NAD 27) and the North American Datum of 1983 (NAD 83). There are three methods generally considered when converting between NAD 27 and NAD 83. These methods are designated, in descending order of accuracy: 1) the recomputation or readjustment of survey observations method, 2) the mathematical transformation method, and 3) the average shift method. In order to maintain consistency of results and to minimize misuse associated with the mathematical transformation method, FGCC recommends software identified as NADCON (North American Datum Conversion) as a Federal standard.

FOR FURTHER INFORMATION CONTACT: Mr. James E. Stem, N/CG1x4, Rockwall Building, Room 110, National Geodetic Survey, NOAA, Rockville, Maryland 20852; telephone: (301) 443-8749.

SUPPLEMENTARY INFORMATION: The intent of this notice is to standardize a horizontal datum transformation method when a mathematical transformation is desired. FGCC selected the method incorporated in the software identified as NADCON. It is not the intent of the notice to declare when to use a datum transformation or by what method but only to declare that when a mathematical transformation is appropriate, NADCON is recommended. Note that NADCON is not appropriate to transform FGCC first- or second-order coordinates between NAD 27 and NAD 83 and retain first- or second-order accuracies in the results. Method 1, recomputation or readjustment of survey observations, is usually more appropriate to maintain first- and second-order FGCC accuracies.

NADCON contains several files of gridded datum shift information computed using a technique known as "minimum curvature." Simply bilinear interpolation is used on the shift data to

determine correctors. At the 67 percent confidence level, this method introduces approximately 0.15 meter uncertainty within the conterminous United States, 0.50 meter uncertainty within Alaska, 0.20 meter uncertainty within Hawaii, and 0.05 meter uncertainty within Puerto Rico and the Virgin Islands. In areas of sparse geodetic data coverage, NADCON may yield less accurate results, but seldom in excess of 1.0 meter. In near offshore regions, results will be less accurate, but seldom in excess of 5.0 meters.

Copies of NADCON based software are available for use on IBM-compatible personal computers. The software code is also available when specifically requested. To obtain copies contact the National Geodetic Information Branch, N/CG174, Rockwall Building, Room 24, National Geodetic Survey, NOAA, Rockville, Maryland, 20852; (301) 443-8631.

Dated: July 16, 1990.
Virginia K. Tippie,
Assistance Administrator for Ocean Services
and Coastal Zone Management, NOAA.
[FR Doc. 90-18809 Filed 8-9-90; 8:45 am]
BILLING CODE 3510-08-M

COMMITTEE FOR PURCHASE FROM THE BLIND AND OTHER SEVERELY HANDICAPPED**Procurement List 1990; Addition**

AGENCY: Committee for Purchase from the Blind and Other Severely Handicapped.

ACTION: Addition to procurement list.

SUMMARY: This action adds to Procurement List 1990 a service to be provided by workshops for the blind or other severely handicapped.

EFFECTIVE DATE: September 10, 1990.

ADDRESSES: Committee for Purchase from the Blind and Other Severely Handicapped, Crystal Square 5, Suite 1107, 1755 Jefferson Davis Highway, Arlington, Virginia 22202-3509.

FOR FURTHER INFORMATION CONTACT: Beverly Milkman (703) 557-1145

SUPPLEMENTARY INFORMATION:

On June 8, 1990, the Committee for Purchase from the Blind and Other Severely Handicapped published notice (55 FR 23465) of proposed addition to Procurement List 1990, which was published on November 3, 1989 (54 FR 46540).

Comments were received on this proposed addition to the Procurement List from the current contractor for this service, who claimed that the addition would adversely affect his firm. He

commented that all of his firm's contracts except this service were received under the small business set-aside (SBSA) procedure and that it is not eligible to receive SBSA contracts because it is no longer considered to be a small business.

The contracting activity has informed the Committee that it intends to contract for this service under the SBA 8(a) program. Consequently, the current contractor would not receive future contracts regardless of the Committee's decision to add this service to the JWOD program because his firm is not eligible to participate in the 8(a) program. Therefore, the addition would not have a serious adverse impact on the commenter's firm.

After consideration of the material presented to it concerning the capability of a qualified workshop to provide the service at a fair market price and the impact of the addition on the current or most recent contractor, the Committee has determined that the service listed below is suitable for procurement by the Federal Government under 41 U.S.C. 46-48c and 41 CFR 51-2.6.

I certify that the following actions will not have a significant impact on a substantial number of small entities. The major factors considered for this certification were:

- The actions will not result in any additional reporting, recordkeeping or other compliance requirements.
- The actions will not have a serious economic impact on any contractors for the services listed.
- The actions will result in authorizing small entities to provide the services procured by the Government.

Accordingly, the following services are hereby added to Procurement List 1990:

Food Service Attendant, Naval Hospital, Portsmouth, Virginia

Beverly L. Milkman,
Executive Director.

[FR Doc. 90-18842 Filed 8-9-90; 8:45 am]

BILLING CODE 6820-33-M

Procurement List 1990; Addition

AGENCY: Committee for Purchase from the Blind and Other Severely Handicapped.

ACTION: Addition to Procurement List.

SUMMARY: This action adds to Procurement List 1990 a commodity to be produced by workshops for the blind or other severely handicapped.

EFFECTIVE DATE: September 10, 1990.

ADDRESSES: Committee for Purchase from the Blind and Other Severely Handicapped, Crystal Square 5, Suite 1107, 1755 Jefferson Davis Highway, Arlington, Virginia 22202-3509.

FOR FURTHER INFORMATION CONTACT: Beverly Milkman (703) 557-1145.

SUPPLEMENTARY INFORMATION: On June 22, 1990, the Committee for Purchase from the Blind and Other Severely Handicapped published notice (55 FR 25689) of proposed addition to Procurement List 1990, which was published on November 3, 1989 (54 FR 46540).

After consideration of the material presented to it concerning the capability of a qualified workshop to produce this commodity at a fair market price, the impact of the addition on the current or most recent contractor, the Committee has determined that the commodity listed below is suitable for procurement by the Federal Government under 41 U.S.C. 46-48c and 41 CFR 52-2.6.

I certify that the following action will not have a significant impact on a substantial number of small entities. The major factors considered for this certification were:

- The action will not result in any additional reporting, recordkeeping or other compliance requirements.
- The action will not have a serious economic impact on any contractors for the commodity listed.
- The action will result in authorizing small entities to produce the commodity procured by the Government.

Accordingly, the following commodity is hereby added to Procurement List 1990:

Lanyard, Camouflage, 1080-01-073-3198

This action does not affect contracts awarded prior to the effective date of this addition or options exercised under those contracts.

Beverly L. Milkman,

Executive Director.

[FR Doc. 90-18843 Filed 8-9-90; 8:45 am]

BILLING CODE 6820-33-M

Procurement List 1990; Proposed Additions

AGENCY: Committee for Purchase from the Blind and Other Severely Handicapped.

ACTION: Proposed Additions to Procurement List.

SUMMARY: The Committee has received proposals to add to Procurement List 1990 commodities to be produced and services to be provided by workshops for the blind or other severely handicapped.

Comments Must Be Received on or Before: September 10, 1990.

ADDRESSES: Committee for Purchase from the Blind and Other Severely Handicapped, Crystal Square 5, Suite 1107, 1755 Jefferson Davis Highway, Arlington, Virginia 22202-3509.

FOR FURTHER INFORMATION CONTACT: Beverly Milkman (703) 557-1145

SUPPLEMENTARY INFORMATION: This notice is published pursuant to 41 U.S.C. 47(a)(2) and 41 CFR 51-2.6. Its purpose is to provide interested persons an opportunity to submit comments on the possible impact of the proposed actions.

If the Committee approves the proposed additions, all entities of the Federal Government will be required to procure the commodities and services listed below from workshops for the blind or other severely handicapped.

It is proposed to add the following commodities and services to Procurement List 1990, which was published on November 3, 1989 (54 FR 46540):

Commodities

Strap Set, Webbing, 4935-00-805-3522
(Remaining Government Requirement)

Binder, Looseleaf
7510-00-782-2664

Lead, Pencil
7510-01-317-6421
7510-01-317-6422

Folder, File
7530-00-222-3443
7530-00-222-3444

7530-00-281-5941
7530-00-281-5942

7530-00-281-5945
7530-00-281-5959

7530-00-281-5960
7530-00-281-5968

7530-00-282-2507
7530-00-282-2508

7530-00-285-1732
7530-00-291-0098

7530-00-663-0031
7530-00-926-8975

7530-00-985-7012

Services

Janitorial/Custodial, Defense Logistics Agency, Defense National Stockpile Zone, HMW -New Haven Depot, State Route 14, 3 Miles East of New Haven, New Haven, Indiana

Janitorial/Custodial, Little White House Child Care Center, 100 North Washington Avenue, Battle Creek, Michigan
Janitorial/Custodial, Social Security Administration Building, 122 West Third Street, Greensburg, Pennsylvania

Beverly L. Milkman,

Executive Director.

[FR Doc. 90-18844 Filed 8-9-90; 8:45 am]

BILLING CODE 6820-33-M

DEPARTMENT OF DEFENSE

Department of the Army

Closed Meeting

In accordance with section 10(a)(2) of the Federal Advisory Committee Act, (Pub. L. 92-463), announcement is made of the following Committee Meeting:

Name of the committee: Army Science Board (ASB).

Dates of meeting: 5-6 September 1990.

Time: 0800-1630 hours.

Place: Auburn University, Auburn, Alabama.

Agenda: The Army Science Board 1990 Summer Study on The National War on Drugs will meet to discuss and review the draft final report on the Study. The briefings will be closed to the public in accordance with section 552(c) of title 5, U.S.C., specifically paragraph (1) thereof, and title 5, U.S.C., Appendix 2, subsection 10(d). The classified and unclassified matters and proprietary information to be discussed are so inextricably intertwined so as to preclude opening any portion of the meeting. The ASB Administrative Officer, Sally Warner, may be contacted for further information at (202) 695-0781/0782.

Sally A. Warner,

Administrative Officer, Army Science Board.
[FR Doc. 90-18804 Filed 8-9-90; 8:45 am]

BILLING CODE 3710-08-M

Department of the Navy

Intent to Prepare an Environmental Impact Statement for Proposed Homeporting of Four Fast Combat Support Ships on the West Coast of the United States

Pursuant to section 102(2)(C) of the National Environmental Policy Act (NEPA) of 1969 as implemented by the Council on Environmental Quality regulations (40 CFR parts 1500-1508), the Department of the Navy announces its intent to prepare an Environmental Impact Statement (EIS) to evaluate the environmental effects of proposed homeporting of four Fast Combat Support (AOE-6 class) ships on the west coast of the United States.

The Navy is acquiring new design, auxiliary ships which will replace various existing supply and fuel type ships over the next 5 to 10 Years. These new AOE-6 class ships will provide fuel, ordnance, and dry and refrigerated stores to operational forces of the U.S. Pacific fleet. The proposed action is to homeport these new ships at existing naval installations to support fleet

requirements. The proposed action also included dredging and shore facility construction at some locations in order to support AOE-6 homeporting requirements.

Candidate homeport sites for detailed study in the EIS are:

Naval Air Station North Island, San Diego, California;
Naval Station Long Beach, California;
Naval Shipyard Puget Sound, Bremerton, Washington.

Homeporting at these naval installations would potentially involve construction of family housing in the San Diego and/or Long Beach areas; dredging and modification of naval support facilities on the waterfront at naval Weapons Station Seal Beach, California; dredging, waterfront modification/construction and acquisition of about 20 acres of land in private ownership adjacent to Naval Shipyard Puget Sound.

The EIS will address the following issues, including but not limited to: Characterization of sediments to be dredged; sediment disposal analysis; impacts to the aquatic environment resulting from dredging and AOE-6 ship movement operations; estuarine impacts resulting from in-water construction in addition to dredging; socioeconomic impacts, including increased student population in school districts associated with the homeporting action; socioeconomic and financial impacts from land use changes resulting from proposed land acquisition; and changes to the terrestrial environment resulting from shore facilities construction and operations.

The Navy will initiate a scoping process or the purpose of determining the scope of issues to be addressed in the EIS. The Navy will host public scoping meetings on:

August 27, 1990, beginning 7 p.m. at the Holiday Inn On-The-Bay, 1355 North Harbor Drive, San Diego, California
August 28, 1990, beginning at 7 p.m. at the Sheraton Long Beach, 333 East Ocean Boulevard, Long Beach, California;
August 30, 1990, beginning at 6:30 p.m. at the Great Northwest Federal Savings community room, 500 Pacific Avenue, Bremerton, Washington.

These meetings will be advertised in area newspapers prior to the meeting dates.

A brief presentation will precede the request for public comments. Navy representatives will be present at these meetings to receive comments on issues of public concern. Federal, state, and local agencies and interested individuals are invited to take this opportunity to identify environmental concerns that should be addressed

during the preparation of the EIS. In the interest of available time, each speaker will be asked to limit oral comments to 5 minutes.

Agencies and the public are also invited and encouraged to provide written comments in addition to, or in lieu of, oral comments at the public meetings. To be most helpful, scoping comments should clearly describe specific issues or topics which the commentator believes the EIS should address. Written statement and or questions regarding the scoping process should be mailed no later than September 14, 1990, to:

For North Island—Commanding Officer, Southwestern Division, Naval Facilities Engineering Command, 1220 Pacific Highway, San Diego, CA, 92132-5196. (Attn: Ms. M.J. Bailey (code 2012), telephone (619) 532-3160);

For Long Beach—Commander, Western Division, Naval Facilities Engineering Command, P.O. Box 727, San Bruno, CA 94068-0720 (Attn: Mr. J. Hendricks, Code 1833, telephone (415) 244-2519);

For Bremerton—Commanding Officer, Engineering Field Activity Northwest, Naval Facilities Engineering Command, 3505 NW Anderson Hill Road, Silverdale, WA 98393-9130 (Attn: Mr. P. Havens, Code 09EP, telephone (206) 476-1091).

Dated: August 7, 1990.

Jane M. Virga,

LT, JAGC, USNR, Alternate Federal Register Liaison Officer.

[FR Doc. 90-18923 Filed 8-9-90; 8:45 am]

BILLING CODE 380-AE-M

Government-Owned Inventions; Availability for Licensing

AGENCY: Department of the Navy.

ACTION: Notice of Availability of Inventions for Licensing.

SUMMARY: The inventions listed below are assigned to the United States Government as represented by the Secretary of the Navy and are made available for licensing by the Department of the Navy.

Copies of patents cited are available from the Commissioner of Patents and Trademarks, Washington, D.C. 20231, for \$1.50 each. Requests for copies of patents must include the patent number.

Copies of patent applications cited are available from the National Technical Information Service (NTIS), Springfield, Virginia 22161. Copies also may be ordered by telephone request to (703) 487-4650. Request for copies of patent applications must include the patent application serial number. Claims are deleted from the patent application copies sold to avoid premature disclosure.

DATES: August 10, 1990.

FOR FURTHER INFORMATION CONTACT: Mr. R. J. Erickson, Staff Patent Attorney, Office of the Chief of Naval Research (Code OOCIP), Arlington, Virginia 22217-5000, telephone (202) 696-4001.

Patent 4,500,295: PERSONNEL ALPHA CONTAMINATION SIMULATOR AND DETECTOR; filed 26 May 1983; patented 19 February 1985.

Patent 4,625,619: DEVICE FOR SEPARATION AND LAUNCH OF A BODY LINEAR AND ROTATIONAL VELOCITY; filed 2 July 1984; patented 25 November 1986.

Patent 4,634,870: THERMAL IMAGE DYNAMIC RANGE EXPANDER; filed 6 May 1985; patented 6 January 1987.

Patent 4,647,966: STEREOSCOPIC 3D LARGE SCREEN LIQUID CRYSTAL DISPLAY; filed 22 November 1985; patented 3 March 1987.

Patent 4,692,769: DUAL BAND COPLANAR SLOTTED DISC MICROSTRIP ANTENNA; filed 14 April 1986; patented 8 September 1987.

Patent 4,842,218: PIVOTAL MONO WING CRUISE MISSILE WITH WING DEPLOYMENT AND FASTENER MECHANISM; filed 8 February 1988; patented 27 June 1989.

Patent 4,883,013: PORTABLE, RAPID INSTALLABLE DOLPHIN SYSTEM; filed 1 May 1989; patented 28 November 1989.

Patent 4,886,163: ELECTROSTATIC DISSIPATION MAINTENANCE AID MODULE CONTAINER; filed 21 April 1989; patented 12 December 1989.

Patent 4,901,644: LANE MARKER; filed 3 April 1989; patented 20 February 1990.

Patent 4,901,951: YAW FIN DEPLOYMENT APPARATUS FOR EJECTION SEAT; filed 5 July 1988; patented 20 February 1990.

Patent 4,902,441: SELF MOISTENING COMPOSITION FOR DEACTIVATING TOXIC SUBSTANCES AND METHOD OF USE; filed 31 March 1988; patented 20 February 1990.

Patent 4,902,627: METHOD FOR DETECTING AMINE-CONTAINING DRUGS IN BODY FLUIDS BY SIMS; filed 5 February 1985; patented 20 February 1990.

Patent 4,902,887: OPTICAL MOTION DETECTOR; filed 31 May 1989; patented 20 February 1990.

Patent 4,902,967: SCANNING ELECTRON MICROSCOPY BY PHOTOVOLTAGE CONTRAST IMAGING; filed 18 May 1989; patented 20 February 1990.

Patent 4,902,992: MILLIMETER-WAVE STRIPLINE MULTIPLEXER; filed 29

- March 1988; patented 20 February 1990.
- Patent 4,907,229: SELECTIVE MULTIMODE/MULTICONFIGURABLE DATA ACQUISITION AND REDUCTION PROCESSOR SYSTEM; filed 23 June 1988; patented 6 March 1990.
- Patent 4,908,929: FABRICATION OF A LOW FREQUENCY STRUCTUREBORNE VIBRATION ISOLATION MOUNT; filed 28 November 1988; patented 20 March 1990.
- Patent 4,909,459: HELMET-MOUNTED HEAD RESTRAINT; filed 3 November 1988; patented 20 March 1990.
- Patent 4,909,609: NONLINEAR OPTICAL PROTECTION AGAINST FREQUENCY AGILE LASERS; filed 4 August 1988; patented 20 March 1990.
- Patent 4,909,625: METHOD AND APPARATUS FOR GENERATING SMALL ANGLES; filed 5 July 1988; patented 20 March 1990.
- Patent 4,909,751: UNDERWATER MATEABLE ELECTRICAL CONNECTOR; filed 20 September 1988; patented 20 March 1990.
- Patent 4,911,902: MULLITE WHISKER PREPARATION; filed 6 July 1987; patented 27 March 1990.
- Patent 4,913,507: MODE FIELD CONDITIONER; filed 8 September 1988; patented 3 April 1990.
- Patent 4,913,961: SCANDIA-STABILIZED ZIRCONIA COATINGS FOR COMPOSITES; filed 27 May 1988; patented 3 April 1990.
- Patent 4,914,442: ADAPTIVE MTI TARGET PRESERVATION; filed 30 January 1989; patented 3 April 1990.
- Patent 4,914,640: MEANS FOR IMPROVING TURN-AROUND TIME STABILITY FOR R-C ENERGY DETECTORS; filed 3 February 1989; patented 3 April 1990.
- Patent 4,914,743: YOKED ORTHOGONALLY DISTRIBUTED EQUAL REACTANCE NON-COPLANAR TRAVELING WAVE AMPLIFIER; filed 27 August 1987; patented 3 April 1990.
- Patent 4,919,382: MULTI POST YOKE GIMBAL; filed 14 September 1988; patented 24 April 1990.
- Patent 4,920,346: UNIDIRECTIONAL AMPLITUDE SENSITIVE NOISE RIDING THRESHOLD CIRCUIT; filed 30 June 1989; patented 24 April 1990.
- Patent 4,921,335: OPTICAL PHASE CONJUGATE BEAM MODULATOR AND METHOD THEREOF; filed 1 September 1988; patented 1 May 1990.
- Patent 4,921,557: FABRICATION PROCESS BY FILAMENT WINDING WITH AN ELASTOMERIC MATERIAL; filed 13 June 1988; patented 1 May 1990.
- Patent 4,922,201: EDDY CURRENT METHOD FOR MEASURING ELECTRICAL RESISTIVITY AND DEVICE FOR PROVIDING ACCURATE PHASE DETECTION; filed 9 January 1989; patented 1 May 1990.
- Patent 4,923,401: LONG RANGE LIGHT PEN; filed 25 November 1988; patented 8 May 1990.
- Patent 4,923,402: MARKSMANSHIP EXPERT TRAINER; filed 25 November 1988; patented 8 May 1990.
- Patent 4,924,182: EDDY CURRENT METHOD TO MEASURE DISTANCE BETWEEN SCANNED SURFACE AND A SUBSURFACE DEFECT; filed 9 January 1989; patented 8 May 1990.
- Patent 4,924,285: MONOLITHIC MULTICHANNEL DETECTOR AMPLIFIER ARRAYS AND CIRCUIT; filed 25 October 1988; patented 8 May 1990.
- Patent 4,927,503: METHOD FOR ASSESSMENT OF CORROSION ACTIVITY IN REINFORCED CONCRETE; filed 10 February 1989; patented 22 May 1990.
- Patent 4,927,782: METHOD OF MAKING SELF-ALIGNED GAAS/ALGAAS FET'S; filed 27 June 1989; patented 22 May 1990.
- Patent 4,928,264: NOISE SUPPRESSING HYDROPHONES; filed 30 June 1989; patented 22 May 1990.
- Patent 4,929,831: ELECTRON BEAM APPARATUS FOR TESTING INFRARED DETECTORS IN A CRYOGENICALLY SHIELDED ENVIRONMENT; filed 8 December 1988; patented 29 May 1990.
- Patent 4,929,837: METHOD FOR DETECTING PINHOLES AND INCOMPLETE COVERAGE OF HERMETIC COATINGS ON OPTICAL FIBER WAVEGUIDES; filed 23 March 1987; patented 29 May 1990.
- Patent 4,929,952: SEARCH-RADAR AZIMUTH CORRECTION; filed 10 October 1989; patented 29 May 1990.
- Patent 4,929,986: HIGH POWER DIAMOND TRAVELING WAVE AMPLIFIER; filed 25 September 1987; patented 29 May 1990.
- Patent 4,930,111: OVERLAP CORRELATOR SYNTHETIC APERATURE PROCESSOR; filed 30 June 1989; patented 29 May 1990.
- Patent Application 070,757: MULLITE WHISKER PREPARATION; filed 6 July 1987.
- Patent Application 215,136: BLOCK PATTERNING OF THE METALLIZATION OF POLYVINYLIDENE FLUORIDE TRANSDUCERS; filed 5 July 1988.
- Patent Application 307,726: PREPARATION OF MULLITE WHISKERS FROM ALF₃, SIO₂, AND AL₂O₃ POWDERS; filed 8 February 1989.
- Patent Application 331,705: HIGH-TEMPERATURE, CORROSION-PREVENTIVE COATING; filed 31 March 1989.
- Patent Application 343,106: POLYMER COMPOSITE PREFORM AND PROCESS FOR PRODUCING SAME; filed 25 April 1989.
- Patent Application 371,782: METHOD AND APPARATUS FOR ASSESSING DISTILLATE FUEL STABILITY BY OXYGEN OVERPRESSURE; filed 27 June 1989.
- Patent Application 405,828: ADVANCED HEAT PUMP; filed 11 September 1989.
- Patent Application 422,723: IMMEDIATE WRITE, READ AND ERASE OPTICAL STORAGE MEDIUM AND METHOD OF MARKING AND ERASING; filed 17 October 1989.
- Patent Application 423,176: PRESSURE SENSITIVE OPTICAL FIBER HAVING OPTIMIZED COATINGS; filed 18 October 1989.
- Patent Application 446,262: SEMI-AUTOMATIC DIRECTION FINDING SET; filed 5 December 1989.
- Patent Application 459,211: ROOM-TEMPERATURE, FLASHPUMPED, 1.96 MICRON SOLID STATE LASER; filed 29 December 1989.
- Patent Application 472,936: METHOD AND ELECTRONIC NEURAL NET FOR MAXIMUM ENTROPY SOLUTIONS OF ILL-POSED PROBLEMS; filed 31 January 1990.
- Patent Application 483,686: MICROPROCESSOR CHIP INCORPORATING OPTICAL SIGNAL COUPLING; filed 23 February 1990.
- Patent Application 483,687: FATIGUE TESTING APPARATUS; filed 23 February 1990.
- Patent Application 483,688: LOGIC LEVEL DATA CONVERSION SYSTEM; filed 23 February 1990.
- Patent Application 484,950: SENSOR BASED ON A TUNELLING TIP DETECTOR; filed 26 February 1990.
- Patent Application 486,024: FLOW IMMUNOSENSOR METHOD AND APPARATUS; filed 23 February 1990.
- Patent Application 486,323: A SCHEINER PRINCIPLE POCKET OPTOMETER FOR SELF-EVALUATION & BIO-FEEDBACK ACCOMMODATION TRAINING; filed 28 February 1990.
- Patent Application 486,324: HIGH RESOLUTION TECHNIQUE AND INSTRUMENT FOR MEASURING LATTICE PARAMETERS IN SINGLE CRYSTALS; filed 28 February 1990.
- Patent Application 486,638: THULIUM-DOPED FLUOROZIRCONATE FIBER

- LASER PUMPED BY A DIODE LASER SOURCE; filed 28 February 1990.
 Patent Application 486,655: CORROSION RESISTANT METALLIC GLASS COATINGS; filed 1 March 1990.
 Patent Application 486,689: CORROSION-INHIBITING COATING COMPOSITION; filed 1 March 1990.
 Patent Application 486,324: HIGH RESOLUTION TECHNIQUE AND INSTRUMENT FOR MEASURING LATTICE PARAMETERS IN SINGLE CRYSTALS; filed 28 February 1990.
 Patent Application 489,138: MEMEORY CELL AND CHIP ARCHITECTURE FOR A FERROELECTRIC RANDOM ACCESS MEMORY; filed 6 March 1990.
 Patent Application 497,175: ALIGNED BISMUTH, STRONTIUM, CALCIUM CUPRATE COATINGS ON POLYCRYSTALLINE MAGNESIUM OXIDE; filed 21 March 1990.
 Patent Application 498,249: PSEUDO-RANDOM SUPPORT STRUCTURE FOR TRANSMISSION GRATINGS; filed 15 March 1990.
 Patent Application 498,883: CONTROLLABLE EFFECTIVE DIAMETER EDDY CURRENT PROBE; filed 26 March 1990.
 Patent Application 499,843: PURIFICATION OF MATERIALS BY COMPLEXING AND ION EXCHANGE; filed 27 March 1990.
 Patent Application 500,979: SELECTIVE METALLIZATION OF POLYETHYLENE TEREPHTHALATE FILMS; filed 29 March 1990.
 Patent Application 501,461: ROOM TEMPERATURE, LASER DIODE-PUMPED, Q-SWITCHED, 2 MICRON, THULIUM-DOPED, SOLID STATE LASER; filed 30 March 1990.
 Patent Application 501,571: HIGH FREQUENCY, FREQUENCY MULTIPLIER USING PARALLEL GUN DIODES; filed 30 March 1990.
 Patent Application 501,996: INFRARED FIBER OPTICS TEMPERATURE SENSOR; filed 23 March 1990.
 Patent Application 506,324: SOLID STATE CIRCUITRY WITH OPTICAL DATA INTERFACING; filed 9 April 1990.
 Patent Application 510,499: TUNABLE, CONTINUOUS WAVE, THULIUM-DOPED, SOLID STATE LASER; filed 30 March 1990.
 Patent Application 511,127: METHOD OF RECYCLING DOSIMETERS; filed 10 April 1990.
 Patent Application 516,956: PHTHALONITRILES MONOMERS CONTAINING IMIDE AND/OR PHENOXY LINKAGES, AND POLYMERS THEREOF; filed 30 April 1990.

Patent Application 517,013: SEMICONDUCTOR HETEROJUNCTION DEVICE WITH GRADED BANDGAP; filed 27 April 1990.

Patent Application 519,064: MULTI-COLOR COINCIDENT INFRARED DETECTOR; filed 4 May 1990.

Date: July 23, 1990.

Jane M. Virga,

LT, JAGC, USNR, Alternate Federal Register, Liaison Officer.

[FR Doc. 90-18744 Filed 8-9-90; 8:45am]

BILLING CODE 3810-AE-M

DEPARTMENT OF ENERGY

Finding of No Significant Impact; Supercompactor and Repackaging Facility and Transuranic Waste Shredder, Rocky Flats Plant, Golden, CO

AGENCY: Department of Energy.

ACTION: Finding of No Significant Impact.

SUMMARY: The Department of Energy (DOE) has prepared an environmental assessment (EA) of the proposed action to construct and operate a supercompactor and repackaging facility (SARF) and a transuranic (TRU) waste shredder (TWS) in the existing Building 776 at the Rocky Flats Plant (RFP). The SARF and the TWS, respectively, would compact and shred solid plutonium-contaminated TRU wastes, including TRU wastes that contain hazardous chemical constituents (TRU-mixed wastes). The purpose of the proposed action is to reduce the waste volumes, waste processing costs, and external radiation exposure to workers. Although the EA demonstrates that the risks associated with the proposed operation of the SARF/TWS and the storage of supercompacted wastes at RFP are low, the DOE is continuing to evaluate options to reduce risks as low as possible. For example, efforts will be implemented over the next two to three years to reduce the risk of storing supercompacted wastes to levels lower than those associated with the status quo by transferring wastes into buildings designed to withstand severe natural phenomena, e.g., earthquakes and high winds.

Based on the analysis in the EA, the DOE issued a proposed finding of no significant impact (FONSI) on March 24, 1990. During the week of March 26, 1990, copies of the EA and proposed FONSI were distributed to the Governors of Colorado and New Mexico, Colorado congressional delegates, local officials, interested organizations, public reading

rooms and local libraries. The proposed FONSI was published in the *Federal Register* on March 30, 1990, beginning a 30-day public review period (Vol. 55, No. 62, pp. 11997-12000). In response to requests by the State of Colorado and others, the public review period was extended to May 22, 1990; notification of this extension was published in the *Federal Register* on May 16, 1990.

In total, 154 comments were received from 14 organizations and individuals. Five of the 154 comments addressed the proposed FONSI, while the remaining comments focussed on the EA. The comments were grouped by technical area and are presented with their respective DOE responses in a new Appendix F to the EA, "Response to Comments on DOE/EA-0432," July 1990. Appendix F has been sent to each of the commenters and to other interested parties and has been made available in the DOE Rocky Flats and Washington, DC, Public Reading rooms. A summary of the public comments and DOE responses are included in the Attachment to this notice.

After considering all the comments received as a result of the public review process, DOE has concluded that no new information has been made available that would change the determination that the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment, within the meaning of the National Environmental Policy Act (NEPA) of 1969, (42 U.S.C. 4321 et seq.). Therefore, DOE is issuing this final FONSI.

ADDRESSES AND FURTHER INFORMATION: Persons requesting additional information regarding the SARF/TWS project or wishing a copy of the EA or its Appendix F, "Response to Comments on DOE/EA-0432," July 1990, should contact:

Beth Brainard, U.S. Department of Energy, Rocky Flats Plant, P.O. Box 928, Golden, CO 80402-0928, (303) 966-2054.

For general information on the SARF/TWS NEPA process, please contact:

Carol M. Borgstrom, Director, Office of NEPA Oversight, U.S. Department of Energy, 1000 Independence Avenue, SW., Washington, DC 20585, (202) 586-4600.

SUPPLEMENTARY INFORMATION:

Background

The Rocky Flats Plant (RFP) is a part of the national nuclear weapons research, development, and production complex administered by DOE. As a result of nuclear weapons production

activities and other programs, RFP produces plutonium-contaminated TRU radioactive wastes as well as TRU wastes that contain nonradioactive hazardous chemical constituents (TRU-mixed wastes). In the past, approximately 34,000 cubic feet (average for 1987 and 1988 fiscal years) of such wastes were repackaged annually at RFP by opening the waste drums, manually removing the package of waste, and placing the package of waste into a waste box. This repackaging method results in minimal volume reduction. The SARF would replace this inefficient manual process of repackaging waste from drums to waste boxes.

The Colorado Department of Health (CDH) limits on-site storage of TRU-mixed wastes to a volume of 1601 cubic yards. The proposed action would compact TRU-mixed waste, and allow storage of effectively twice as much TRU-mixed waste at RFP, thereby enabling operations to continue in compliance with the CDH requirements until alternate storage (on-site and off-site alternatives are being considered) and/or disposal sites are approved.

Proposed Action

The proposed action is to construct and operate the SARF to reduce the volume of TRU and TRU-mixed wastes and to construct and operate the TWS to shred classified graphite molds and used filters. The purpose of the proposed action is to reduce the external radiation dose to workers, reduce waste volume and process costs, and enable operations at RFP to continue in compliance with Resource Conservation and Recovery Act (RCRA) requirements. Average volume reductions of 5 to 1 and 2 to 1 are expected for wastes to be processed in the SARF and TWS, respectively. An overall volume reduction of approximately 2 to 1 would be achieved for all RFP TRU wastes, taking into account that there are certain wastes that cannot be supercompacted.

Wastes processed by the SARF and the TWS would be stored in designated storage areas in existing buildings on-site until either transferred to alternate storage site(s) or shipped to the Waste Isolation Pilot Plant (WIPP). Transportation of all supercompacted wastes would take place in double-walled steel shipping containers certified by the Nuclear Regulatory Commission (NRC), referred to as Transuranic Package Transporters (TRUPACT II). (WIPP is a mined repository in New Mexico at which the Department of Energy plans to conduct research and development to evaluate

its use as a potential disposal facility for defense-related TRU and TRU-mixed wastes. For a detailed discussion of transportation and operations associated with the WIPP, see the WIPP Final Supplement Environmental Impact Statement, DOE/EIS-0026-FS, January 1990.)

All drums and boxes of waste that would be treated in the SARF or the TWS would first be scanned by non-destructive assay equipment to assure that the containers do not exceed established fissile material limits. In addition, all drums to be processed in the SARF would be scanned by real time radiography equipment to assure that the containers do not contain free liquids.

Two categories of waste would be processed in the SARF: soft or combustible waste and hard or noncombustible waste. Combustible wastes include such items as paper and plastic. Noncombustible wastes include miscellaneous metals, piping, motors, glass, Raschig rings, process filters, and high efficiency particulate air (HEPA) filters. Hard wastes packaged in 35-gallon steel drums would be directly supercompacted (drum and all) into "pucks," and the pucks would be loaded into 55-gallon steel drums for final disposal. Bags of soft wastes, initially packaged in 55-gallon drums, would be unpackaged and precompacted into 35-gallon drums and then supercompacted as described above. To achieve further volume reduction, process filters and HEPA filters may also be precompacted into 35-gallon drums and then supercompacted into pucks, the same as soft wastes. Supercompaction would be achieved by a 2,200-ton hydraulic ram cylinder. Precompaction would be achieved by a 30-ton hydraulic ram cylinder. During the initial SARF operating period, an estimated maximum of approximately 15,000 cubic feet of TRU and TRU-mixed wastes would be removed from storage, repackaged, and supercompacted concurrently with the normal waste production feed to SARF.

The TWS would be used to declassify and reduce the size of graphite molds, and to shred and reduce the size of filters. The shredder would consist of two counter-rotating shafts with knives that would shred the waste materials into scraps measuring approximately 1 inch by 2 inches by 2 inches or smaller. Shredded molds would be loaded into 55-gallon drums for storage and disposal. Shredded filters would be loaded into 35-gallon drums for supercompaction.

Both the SARF and the TWS processing equipment would be operated in gloveboxes in order to limit radiological and hazardous chemical exposures to workers. The glovebox enclosures would be maintained under negative air pressure, relative to the air pressure within the surrounding room. Air effluents from the gloveboxes would be filtered through four stages of HEPA air filters before being discharged to the atmosphere through rooftop vents. The air in the room surrounding the gloveboxes and the air being discharged to the atmosphere would be continuously monitored to detect increases in airborne alpha radiation. If alpha radiation were detected in concentrations exceeding 0.01 picocuries/cubic meter, an investigation will be conducted to determine the cause(s) and the corrective action that will be taken.

Numerous control measures have been included in the design and operating procedures for the SARF and the TWS to mitigate and control potential nonroutine hazards. Both the SARF and the TWS gloveboxes would contain fire prevention, detection, and suppression systems. Nuclear criticality controls would be implemented to limit the plutonium content in the wastes and to establish standard procedures that would eliminate the potential for a nuclear criticality incident. Prior to and during waste treatment in the SARF and the TWS, wastes would be segregated to avoid mixing of incompatible wastes. In order to prevent TRU waste from becoming contaminated by TRU-mixed waste, cleaning procedures would be used to decontaminate both the SARF and the TWS treatment equipment whenever a batch of TRU waste was to be treated after a batch of TRU-mixed waste. In order to mitigate the potential for gas buildup in drums of supercompacted waste, the drums would be equipped with carbon composite filters to permit venting of the gas while retaining radioactive materials.

Although the EA demonstrates that the risks associated with the proposed operation of the SARF/TWS and the storage of supercompacted waste are low, the DOE is continuing to evaluate all possible options to reduce the risks to the lowest possible levels. For example, efforts will be implemented over the next two-to-three-year period to reduce the risk of storing supercompacted wastes to levels lower than those associated with the status quo by transferring wastes into buildings designed to withstand severe

natural phenomena, e.g., earthquakes and extreme winds.

Alternatives Considered

Alternatives to the proposed action that were discussed in the EA included the no action alternative, the packaging line and in-drum compactor alternative, and the no treatment alternative.

Under the no action alternative (i.e., continuing current operations), wastes would continue to be manually repackaged from drums into standard waste boxes. The no action alternative would require three workers to continue using supplies air suits during normal operations, which is contrary to the DOE policy to reduce radiation exposures to levels as-low-as-reasonably-achievable (ALARA) and to an RFP directive to implement ALARA by eliminating routine operations which require use of supplies breathing air. Although much less efficient than the proposed action, the no action alternative would provide minimal volume reduction and a more efficient method of waste handling than the no treatment alternative (see below).

The repackaging line and in-drum compactor alternative would reduce the volume of soft wastes by shredding and compaction (not supercompaction) of the wastes into 55-gallon drums. The in-drum compactor would achieve a soft waste volume reduction of approximately 3 to 1. With this alternative, hard wastes would continue to be manually repackaged.

Under the no treatment alternative, drums of TRU and TRU-mixed wastes would be prepared by the RFP generator for direct shipment to storage and/or off-site disposal. There would be no volume reduction and there would be an increase in the number of waste containers relative to any other alternative.

Environmental Considerations

Because the SARF and the TWS treatment equipment would be operated inside gloveboxes located inside the existing Building 776, there would be no direct construction-related impacts to wetlands, threatened or endangered species, or historical resources. Routine operation of the SARF and TWS would create no detectable increases in radioactive or non-radioactive emissions to the existing environment and would not affect continued compliance with the Clean Air Act. The proposed action would create no wastewater effluents or discharges and would not affect compliance with the Clean Water Act. Operations of the SARF/TWS and storage of supercompacted TRU-mixed wastes

would be consistent with the interim status change requested under RCRA in November 1989.

Routine Operations: Analyses were conducted to assess worker and public exposures to radiation and hazardous chemicals during both routine operations and potential accidents. Routine operation of the SARF and the TWS was estimated to result in a combined maximum radiation dose to a member of the public of 2×10^{-11} rem/year committed effective dose equivalent (CEDE), which is approximately one billionth of that permitted under applicable limits established by the Environmental Protection Agency (10 rem/year from airborne pathways). Assuming the same workers would operate both the SARF and the TWS, the average annual exposure to each worker was estimated to be approximately 0.9 rem or about 20 percent of the applicable DOE limit (5 rem-effective dose equivalent), which would be a reduction in exposure relative to the no action alternative.

Risks From Abnormal Events: A range of potential accidents was considered in the EA based on preliminary design characteristics and a knowledge of existing DOE plutonium operations. By using conservative assumptions (i.e., those that tend to overestimate potential impacts), the EA attempted to bound all reasonably foreseeable adverse impacts of the proposed action.

Principal exposure pathways are external radiation and potential uptake of radioactive material by inhalation of respirable particles. Exposures were calculated for maximally exposed individual members (MI) of the public and the RFP workforce as well as to the projected population living within a 50-mile radius of RFP in the year 2008 (2,916,000 people). The MI is a hypothetical offsite individual, usually located at or not far from the RFP boundary, in a location of maximum possible exposure as determined by the AIRDOS-EPA computer code.

To lend further perspective, the accident calculations were also made under two sets of meteorological conditions defined as representative and unfavorable. The representative analyses incorporated atmospheric conditions (e.g., wind speed and direction) representative of prevailing conditions at RFP, while the unfavorable analyses utilized conservative assumptions to provide an upper estimate of potential impacts. The unfavorable conditions will have a lower probability of occurrence than that for representative conditions.

Accident Scenarios: A suite of accidents was analyzed to estimate

potential radiological exposures to workers and the general public: (1) A criticality; (2) a fire on a loading dock; (3) a waste bag rupture at a glovebox airlock; (4) a breach of a drum on a loading dock; (5) a design basis earthquake; and (6) a design basis wind (DBW). Hypothetical exposures to the MI member of the public ranged from 4.6×10^{-9} to 5.8×10^{-1} rem CEDE and from 4.9×10^{-8} to 1.4×10^{-2} rem CEDE for representative and unfavorable meteorological conditions, respectively. The highest potential exposures to the public would be associated with the fire on the loading dock for representative conditions and with the DBW scenario for the unfavorable conditions. (It should be noted that the actual risks associated with the temporary staging of supercompacted wastes on the loading dock would not increase relative to current operations because administrative controls would be implemented to limit the amount of radioactivity at risk on the loading dock to existing levels.) The population exposure was estimated to be highest under both sets of meteorological conditions for the DBW scenario, with a calculated projection of 6 to 109 excess latent cancer fatalities (LCFs). The calculated LCFs must be viewed in conjunction with the low probability of occurrence (10^{-4} /year) of the DBW.

Maximum individual occupational exposures were calculated for the accident scenarios. Potential exposures (excluding that from a criticality accident, as discussed below) were calculated to range from 0.02 to 66 rem CEDE. The highest exposure is associated with the fire on the dock scenario. Exposures in the dock fire scenario are assumed to occur during the initial stages of the fire before evacuation could take place and would be incurred by a small number of workers in the immediate area. Exposures from the dock fire (and all other DBAs) would not result in any prompt fatalities and are unlikely to produce any LCFs.

Regarding a potential criticality accident, reaching a critical mass of plutonium in the supercompactor or a supercompacted waste drum would require multiple violations of operating procedures and controls, and, therefore, is considered to be an extremely unlikely occurrence. However, because it is not possible to entirely rule out such an event, it was analyzed in the EA.

Depending on their proximity to the accident, workers could suffer lethal radiation exposure. However, the actual risks associated with this scenario are very small due to the unlikely

probability of occurrence. In more than thirty-five years of operations at RFP, no criticality accident has been experienced.

Severe Accident: A postulated accident scenario of an aircraft crash into the SARF/TWS facilities and/or any of the buildings proposed to store supercompacted waste was analyzed in the EA. The crash was assumed to result in a fire and release of radioactivity to the environment and was based, in part, on analyses conducted for the 1980 Rocky Flats Plant Final Environmental Impact Statement (FEIS). The scenario takes into account the probabilities of an aircraft crash at the RFP, the penetrability of walls/barriers of storage buildings, the ratio of the waste storage areas to the total area within a building, and assumes that storage areas are at full capacity following implementation of supercompaction. The annual probability of release from any waste storage area was estimated to be approximately 1.2×10^{-7} , ranging from 1.1×10^{-8} to 3.2×10^{-8} for each of the five storage areas for TRU-mixed waste. The associated incremental population exposure (i.e., compared to exposures associated with storage of uncompacted wastes) ranges from 1.7×10^4 to 1.5×10^6 person-rem (5 to 420 LCFs), depending on the storage areas involved and meteorological conditions existing at the time of the accident.

Hazardous Chemical Analyses: Risk analysis was also conducted to determine the predicted cumulative cancer risk to the public at the site boundary due to hazardous chemical emissions from the routine operation of the SARF and TWS.

The predicted individual lifetime cancer risk from hazardous constituents was less than one chance in one million. Hazardous chemical exposures from accidents associated with the proposed action were predicted to result in insignificant hazardous chemical impacts to an individual located at the site boundary. Because the SARF and TWS would be operated in gloveboxes and other safety features would be implemented, there should be no opportunity for workers to come in physical contact with any hazardous materials during routine operations, thereby minimizing occupational exposures to hazardous chemicals. Impacts to workers from potential accidental releases of hazardous materials were also evaluated and determined to be insignificant.

Transportation and Disposal: Transportation and disposal impacts of wastes treated by the SARF and the TWS were discussed and analyzed in the Supplemental Environmental Impact

Statement for the Waste Isolation Pilot Plant (DOE/EIS-0026-FS, January 1990). Supercompaction would result in decreased waste volumes, increased waste densities, and therefore less waste volume to be transported and disposed. Although more radioactivity could be shipped per shipment, greater densities and the packaging of the wastes as pucks inside 55-gallon drums would result in additional self-shielding of radiation as well as provide an additional barrier during potential transportation accidents. As previously discussed, the SARF and TWS treated wastes would be shipped in double-walled steel TRUPACT II containers licensed by the NRC that meet all applicable Department of Transportation safety regulations. Wastes processed through the SARF/TWS would pose no unusual transportation and handling risks or preclude alternatives bearing on the long-term performance of the WIPP.

Determination

In comparing the environmental impacts resulting from the proposed action and the alternatives, neither the proposed action nor any alternative was found to result in significant adverse impacts. The proposed action was predicted to result in beneficial impacts due to waste volume reductions that would decrease waste transportation and disposal volumes.

Based on the information and analyses in the EA as well as the review of the information received from the commenters, DOE has determined that the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment, within the meaning of NEPA; therefore, DOE has determined that preparation of an environmental impact statement is not required.

Issued at Washington, DC, this 3rd day of August 1990.

Peter N. Brush,

Acting Assistant Secretary, Environment, Safety and Health.

Attachment—Summary of Comments Received on the Proposed FONSI

Fourteen organizations and individuals submitted comment letters on the proposed FONSI and the supporting EA during the public review and comment period from March 30 to May 22, 1990. All of the comments and the respective responses are published in Appendix F to the Environmental Assessment as "Response to Comments on DOE/EA-0432," July 1990. The following summary briefly describes the significant comments and DOE's

responses. Readers interested in specific comments or DOE's detailed responses should refer to Appendix F.

Five comments that were specific to the proposed FONSI and the DOE's responses to those comments follow:

Comment: Page 3 of the FONSI confirms suspicions that the SARF is simply a short-term emergency solution to avoid surpassing the 1601 cubic yard limitation imposed by CDH. The FONSI admits to needing the SARF to continue operations while complying with RCRA.

Response: Planning for the SARF began in 1985 in order to reduce the external radiation dose to workers during waste handling and repacking, to enhance safety, and to reduce waste volume and process costs. Initial funding for the SARF was received in Fiscal Year 1987. The planning and funding for the SARF were initiated prior to the implementation of the 1601-cubic-yard volumetric storage limit for TRU-mixed waste that is contained in a letter dated December 15, 1988, from Thomas P. Looby, Assistant Director for Health and Environmental Protection, Colorado Department of Health. As proposed, the SARF and TWS will reduce the volume of TRU-mixed wastes to be generated at RFP, will reduce the volume of wastes currently being stored, and will help ensure continued compliance with the 1601 cubic yard volumetric storage limitation until alternate storage and/or disposal sites are approved.

Comment: Page 6 of the FONSI states that effluent from the gloveboxes would be filtered and then discharged to the atmosphere. The FONSI fails to address the composition of the effluent and the amount of that effluent. A finding of no significant impact should assess exactly what is being discharged and why that discharge has no significant impact. As stated in my comments on the EA, an alarm will sound if alpha radiation is detected above a limit, but the FONSI fails to state what the contingency plan is during the time between the sounding of the alarm and the implementation of the corrective action. Specifically, does the operation cease until the cause is found?

Response: As stated on page 5-2 of the EA, High Efficiency Particulate Air (HEPA) filters will be operated to reduce particulate emissions to not more than $0.02 \mu\text{Ci}/\text{m}^3$. The assessment of the risk of these emissions is found on pages 5-11 and 5-16 of the EA and mentioned under "Routine Operations" in the FONSI. Continuous monitoring will confirm the safe concentrations of particulates, americium, and plutonium.

If emissions of non-specific alpha emitters exceed 0.02 pCi/m³, an investigation will be conducted to determine the cause(s) and the corrective action that will be taken. If there is a potential health risk, the necessary operations will be shut down until the problems are corrected. There is no immediate or long-term health hazard at a release level of 0.02 pCi/m³. For example, this concentration is one hundred times lower than the most restrictive Derived Air Concentration (DAC) for workers, as presented by the U.S. Environmental Protection Agency Federal Guidance Report #11 (EPA-520/1-88-020) will be based on recommendations from the International Commission on Radiological Protection (ICRP). Additionally, this concentration level does not consider the dilution that will occur when the material leaves the discharge point and is dispersed in the surrounding air.

The composition of the hazardous chemicals expected to be released annually under normal operations is provided in Table 5-10 of the EA. Table 5-10 also provides an estimate of the upperbound quantities of annual chemical releases and a hazard assessment of their significance.

Comment: Page 6 also states that drums of supercompacted waste will have carbon composite filters for venting of gas. Will the filtered effluent gas cause any significant impact? What is the composition of the effluent filtered gas?

Response: The effluent filtered gas is expected to be composed of carbon dioxide and hydrogen. The carbon composite filter would retain particulate radioactive material and allow the generated gas to diffuse out of the drum into the surrounding area. However, there is not expected to be sufficient carbon dioxide or hydrogen gas generation from supercompacted waste to cause any significant impact.

Comment: Page 8 of the FONSI states that the SARF and TWS would create no detectable increases in emissions to the environment. The EA did assess the risks to the public and the workers, so there must be some increase in emissions for the public and workers to be at some increased risk. In fact, pages 7 and 8 of the FONSI admit that there is some increased exposure from the routine operation of the proposed action.

Response: Page 8 of the proposed FONSI states that routine operation of SARF and TWS was estimated to result in a combined maximum radiation dose to a member of the public of approximately one billionth of that permitted under applicable limits. This radiation dose is not detectable. Page 7

does not discuss risk from routine operations, but from postulated accidents.

Comment: Page 11 goes to great lengths to point out that criticality is unlikely and that it has never occurred at the RFP. As stated in my comments *supra*, were not the 1957 and 1969 fires the result of criticality or aggravated by criticality as a result of the fire fighting efforts? Criticality does not seem as unlikely as the FONSI would have us believe.

Response: Neither fire was the result of a criticality situation, and even though water was used on burning plutonium for the first time in the 1969 fire, its use did not create a nuclear criticality. The September 11, 1957, fire started in a can of plutonium casting residue in processing Building 771. The May 11, 1969, fire was reported as a result of spontaneous ignition of a 1.5 kilogram briquette of scrap plutonium alloy in an open metal can.

Summary of Comments on the Environmental Assessment

The comments on the EA were aggregated into 18 categories of issues and concerns. Following is a summary of the comments and the responses for each respective category. The complete comments and the respective responses are contained in the "Response to Comments on DOE/EA-0432" document (Appendix F to the EA).

1.0 Volume Reduction (Nine Comments)

Commenters sought information on the volumes of waste being produced and the volume reduction that is proposed to be achieved by the supercompactor. In response to the comments, further clarification is provided in Appendix F to the EA on the anticipated waste volumes to be reduced. Appendix F provides a table that shows the 1987 and 1988 average, the approximate normal TRU and TRU-mixed waste production volumes, and the respective volumes following supercompaction.

In response to a comment on determining the compactability of drums of waste, Appendix F states at page 2-4 that the compactability will be determined based on the weight and the mass of waste in the drum. Pucks will be selectively placed in the overpack drum so as to minimize void space. If necessary, the height of the pucks will be controlled by not compacting to maximum density, thus minimizing void space in the overpack.

2.0 Operations (Nine Comments)

Comments were received on use of respirators, use of photoelectric cells, inspections and maintenance, compacting wastes without the use of metal drums, inclusion of diagrams of hydraulic systems, glovebox details, operation of the TWS automatic kickout device, and the comparison of SARF operation with other operations. The responses respectively discussed that the only parts of the SARF and TWS operation that will require respiratory protection are the opening of boxes or drums of waste to be placed into the gloveboxes, and the removal of filled drums from the bag ports.

Administrative procedures dictate that respirators will be worn whenever a waste drum or other container is opened or whenever material is being removed from a glovebox through a bag port as an additional precautionary measure.

In response to comments regarding use of photoelectric cells, Appendix F states at page 2-5 that the grapple hoist is operated by controls located on a panel outside of the glovebox and, therefore, use of the photoelectric cell system does not apply. The photoelectric cells are designed so that they can not be overridden by the operator. Operation of the cells will be verified by a Preventive Maintenance Order (PMO) schedule.

Standard operating procedures and administrative controls will require and assure adequate inspection and maintenance of the floor surface and sealant, the SARF and TWS equipment, gloveboxes, etc.

In response to the comment regarding the compaction of wastes without using metal drums, Appendix F states at page 2-7 that metal drums are necessary to contain the wastes during supercompaction and precompaction, and that the drums are required by current Waste Isolation Pilot Plant Waste Acceptance Criteria (WIPP-WAC). (Potential impacts associated with gas generation due to corrosion of ferrous metal drums are discussed in Section 6.0, Gas Generation, of this attachment.)

With regard to diagrams of hydraulic systems, glovebox details, and their placement, etc., they were not included in the EA because they contain Unclassified Controlled Nuclear Information subject to section 143 of the Atomic Energy Act of 1954, as amended, and are therefore not available for public dissemination.

Regarding operation of the automatic kick-out device on the TWS, when materials are introduced to the shredder

that will not pass through the blades, the automatic kick-out device will reverse the direction of rotation of the shredder blades. In the event that unshreddable material becomes lodged in the shredder, the unit will be manually cleaned via a maintenance access panel.

In response to a comment requesting a comparison of the SARF to current operations, Appendix F notes at page 2-6 that because the SARF improves upon current operations, it will result in less risk than the no action alternative.

3.0 Ventilation and filtration (24 Comments)

Many commenters expressed concern about the plutonium contained in the ventilation ducts at RFP and the adequacy of the ventilation system in Building 776. Plutonium has been found in a number of ducts at RFP, and a program is underway to remove plutonium from any duct that has 400 grams or more of plutonium. Also, steps will be taken to reduce future accumulation, and a comprehensive monitoring program is being implemented to monitor any further accumulation so that accumulation can be addressed before it becomes a problem. With the exception of one line that feeds into Plenum 250 (which is in no way affected or influenced by operation of the SARF and TWS), the duct assay program has found only small amounts of plutonium in ducts in Building 776. The measurement program is continuing and will provide more details on the status of plutonium in ducts. The SARF and TWS will have completely new ductwork that extends to the second story of Building 776. This ductwork will tie into an elbow just above Plenum 205, which contains four stages of HEPA filters. Operation of the SARF and TWS will not impact or be impacted by any current accumulation of plutonium in ducts at Rocky Flats.

Regarding ventilation, the Appendix F notes at page 2-10 that Plenum 205 in the Buildings 776/777 ventilation and filtration system is operating at 40 percent capacity. With addition of the SARF and TWS gloveboxes, Plenum 205 will be operating at approximately 67 percent capacity. Gases and air from gloveboxes and down-draft tables are filtered through a minimum of four stages of high efficiency particulate air (HEPA) filters prior to discharge through rooftop ventilation exhausts. The first bank of HEPA filters has an efficiency of 99.97 percent, and each succeeding bank has an efficiency of 99.80 percent. Continuous particulate air samplers and selective alpha air monitors continuously monitor the effluents to indicate that the filters are operating

correctly. The resulting impacts are predicted to be insignificant (a maximum annual individual exposure of 2×10^{-11} rem).

The SARF glovebox does not incorporate a bypass around the prefilter. European commercial reprocessing facilities are not good comparisons to SARF glovebox operation because their operations may include handling materials with much higher levels of radioactivity and much higher dose levels than the waste to be processed in the SARF. A number of European facilities that are already using supercompaction do not provide a comparable glovebox design because none of them have installed the supercompaction equipment in a glovebox.

The EA used very conservative assumptions to estimate the releases of hazardous materials during operation of the SARF and TWS. The maximum releases of hazardous chemicals to the environment are quantified in the EA in Table 5-10. The risks associated with the potential hazardous chemical releases from the SARF and TWS operation are not significant.

4.0 Repackaging (Five Comments)

There were concerns with the repackaging, handling and transportation of old deteriorated containers of waste, containment of the wastes, and worker exposure. The responses to comments explain that the wastes to be repackaged were generated within approximately the last 5 years, and have been continuously sorted within buildings at RFP since generation. In compliance with the Resource Conservation and Recovery Act (RCRA) and Standard Operating Procedures, all RCRA storage areas are inspected on weekly schedules. Any potential container problems are resolved. Prior to transfer of existing wastes from the RCRA storage areas for repackaging, the containers will be examined to detect any leaking material, labeling problems, etc. Any problems that are found will be corrected prior to movement of the container. Standard Operating Procedures and verification forms will be used to ensure proper transfer and repackaging of the wastes. Wastes will be repackaged in the Advanced Size Reduction Facility (ASRF) and the Size Reduction Vault. Personnel working in the ASRF will be required to wear full-face mask respiratory protection, and personnel working in the Size Reduction Vault will be required to use supplied air suit, in order to limit worker exposure.

5.0 Waste Characterization and Compatibility (Eight Comments)

Three comments expressed concerns regarding the mixing of incompatible wastes. The response explains that waste segregation will be conducted in compliance with Standard Operating Procedures and RCRA which require personnel training, recordkeeping, contingency plans, quality assurance audits and emergency procedures in order to avoid mixing of incompatible wastes. Due to the radioactive nature of the materials, it is not feasible to actually test the materials to confirm content.

In response to other comments, Appendix F clarifies at page 2-20 that the SARF and TWS are proposed to treat only TRU and TRU-mixed wastes. The treatment of other wastes is not proposed.

6.0 Gas Generation (10 Comments)

The comments requested additional information regarding the carbon composite filters that will be used to vent drums of supercompacted wastes. Appendix F explains at page 2-23 that the TRU Waste Compliance Program requires each drum of waste, not just supercompacted waste, to be equipped with a filter. The filter materials to be used are carbon-carbon composite high efficiency particulate air filters, which trap radionuclides while allowing gases such as hydrogen to pass through. The filters are resistant to radiation and acid damage, and exhibit a filtering efficiency of greater than 99.97 percent. Each filter is individually tested and certified prior to use.

There were two comments regarding gas ignition and explosion during drum piercing. Appendix F notes at page 2-24 that several factors preclude potential ignition of gases: soft wastes will be manually sorted; hard wastes will have recently been placed in the drum, minimizing the period of time for gases to accumulate; and a waste drum sampling program that was completed in March of 1989 indicated that gas concentrations were well below flammable/explosive levels.

In response to other comments, Appendix F reiterates at page 2-22 that supercompaction will not increase the maximum rate of gas generation from radiolytic degradation. Consequently, the standard carbon filters will have adequate flow capacity to vent supercompacted wastes. The supercompaction process will tend to rupture any bags or containers and enhance venting of gases within the drum of supercompacted waste. The

compaction process will generate very little heat; therefore, no chemical reactions should occur during the compaction process that would cause a rapid pressure increase in the drum. With the waste management controls (segregation of soft and hard wastes, segregation of incompatible wastes and absence of free liquids, etc.), the excessive gas generation problems that have been observed in less than 1 percent of the supercompacted waste at another site are not expected to occur at RFP.

Also, it is noted on page 2-22 of Appendix F that the Department is preparing to enter the Test Phase at WIPP, the principal focus of which is to characterize gas generation potential as a result of corrosion, radiolysis, and bacterial action. The Test Phase (approximately five years) is designed to determine future TRU waste processing and/or engineering requirements, including modification of existing practices, if necessary. The volume of supercompacted waste that could be produced over the next five years (i.e., prior to decisions regarding potential alternative processing requirements) would be approximately one percent to two percent of WIPP's total disposal capacity. Gas generation due to corrosion of ferrous metals in such a small quantity of supercompacted waste, whether or not future waste package designs move to non-corroding concepts, would not significantly impact the overall gas generation rates in WIPP. If the Test Phase results indicate that supercompacted wastes would require further processing prior to disposal, emplacement of this small volume of unprocessed supercompacted waste in WIPP is not expected to impact WIPP's ability to comply with the EPA disposal standards or any applicable environmental or safety standards. Furthermore, the small volume of supercompacted waste scheduled to be used in the WIPP repository during the Test Phase will be fully retrievable, as addressed in the WIPP Waste Retrieval Plan. In summary, DOE believes that eventual emplacement of the relatively small amount of supercompacted waste to be generated at RFP concurrent with the Test Phase is not significant in terms of its potential impacts on the total performance of the WIPP.

7.0 Criticality (14 Comments)

Comments on criticality expressed concerns with criticality levels and controls, the possibility of a criticality, non-destructive assay (NDA) testing, and criticality alarms. The responses reiterate the preliminary criticality limits placed on the waste containers entering

and exiting the SARF and TWS and on the drums of waste placed in storage. The criticality limits are preliminary because, prior to establishing final criticality limits and operation of the SARF and TWS, a final criticality review will be conducted to confirm operating procedures, equipment placement, the proximity of other plutonium sources, etc. The final criticality limits will be extremely conservative and will be strictly enforced.

In the very unlikely event that a drum were to contain a critical mass of plutonium, worst-case conditions would be required for a criticality to occur. In the EA, these worst-case conditions were assumed to be present only for the purposes of accident impact evaluations. All personnel working in buildings in which plutonium is handled and stored are trained to recognize and respond to criticality alarms.

8.0 Liquids Management and Processing (10 Comments)

Comments in this category sought information on liquids contained in drums to be supercompacted, and on the collection, transfer, and treatment of the liquids. DOE's response reiterates that all wastes to be treated by the SARF will be screened for the presence of free liquids by real time radiography. Containers with free liquids will not be processed in the SARF. Any residual liquids that are compressed out of the drums during supercompaction will be collected and ultimately transferred to Building 374 for waste treatment by an evaporator. Additional explanation is provided in the responses regarding the liquid collection and transfer system design. In response to two comments, Appendix F states at page 2-35 that the proposed action will not produce liquid wastes that will be spray-irrigated.

9.0 Impacts to Great Western Reservoir (Two Comments)

One commenter was concerned about potential impacts to Great Western Reservoir. DOE's response confirms that TRU-mixed wastes will be stored in RCRA-permitted storage units in buildings on-site and monitored to prevent any contamination or impacts to surface or groundwater. Operation and storage will be conducted in compliance with RCRA, which requires personnel training, facility maintenance, contingency plans, emergency procedures and recordkeeping. The proposed action is not predicted to cause impact to Great Western Reservoir.

10.0 BEIR V (Two Comments)

Comments requested that decisions on the EA be delayed until DOE has completed its evaluation of BEIR V (the National Research Council's Committee on the Biological Effects of Ionizing Radiation (BEIR) fifth report on the *Health Effects of Exposure to Low Levels of Ionizing Radiation*), and that all analysis be based on new risk estimates contained in the BEIR V report. The response to comment states that the major changes resulting from the BEIR V report concern low energy transfer (LET) radiation (beta and gamma). The DOE is continuing to review the BEIR V report to determine any warranted changes in risk estimation methods for the generally low dose/low dose rate circumstances analyzed for the proposed action. For the dose calculations presented in the SARF and TWS EA, which primarily involve alpha radiation exposure, BEIR V is not significant because resulting risks from any anticipated changes in health effect factors would remain low and would not alter the conclusions regarding the environmental impacts of the proposed action.

11.0 Radiological Impact Analysis (27 Comments)

Several comments stated that supercompacted wastes should not be stored in buildings that do not meet criteria for design basis wind and design basis earthquakes. The response states that DOE is continuing to evaluate all possible options to reduce the risks to the lowest possible levels. For example, efforts will be implemented over the next two-to-three-year period to reduce the risks of storing supercompacted wastes to levels lower than those associated with the status quo by transferring wastes into buildings designed to withstand severe natural phenomena. In the long range plan for Rocky Flats, Building 776 was identified as the place to put the SARF and TWS because Building 776 had the space to put this equipment and it was close to the size reduction facilities and other waste handling equipment. It is planned that waste handling should become a self-contained operation. This reduces handling of waste and allows for more efficient operations. The risks identified in the EA come from the storage of waste and not from operations associated with the SARF and TWS themselves. Only small amounts of waste will be staged in the vicinity of the SARF and TWS for processing. In the early 1990's, the exterior containment of Buildings 776/777 is

scheduled to be upgraded to withstand a design basis wind and a design basis earthquake.

There were several comments on accident analysis to which the responses provide additional information on release fractions, Dose Conversion Factor, worker doses, etc. Several comments recommended the evaluation of other accident scenarios. The responses demonstrate that the alternative accident scenarios were either not feasible or were bounded by accidents that are analyzed in the EA.

12.0 Hazardous Chemical Impact Analysis (Three Comments)

In response to two comments regarding the use of Threshold Limit Values (TLVs) and Acceptable Intake Chronic (AIC) levels, Appendix F explains at page 2-48 that TLVs establish acceptable time-weighted average concentrations of various contaminants to which workers can be exposed during a normal 8-hour shift, 40-hour work-week schedule without receiving any adverse effects after a lifetime of exposure. In the absence of specific public health protection criteria, this type of analysis is adequate for assessing impacts to the public considering the conservatism used in the dispersion modeling and in the release fractions, and considering the shorter duration of exposure. AIC values are only defined for chronic long-term exposures. They are not appropriate for very short-term acute exposures. The TLV-based Hazard Indices are the current methodology used to assess potential health effects from short-term accident exposures.

In response to a comment that hazardous chemical exposures from TWS operation were not discussed in the EA, the commenter is referred to Table 5-10 in the EA that contains hazardous chemical emissions and impacts from SARF and TWS operation.

13.0 Storage and Storage Limit (Nine Comments)

Several of the commenters viewed the proposed action as a short-term plan to subvert the intent of the 1601 cubic yard limit for on-site storage of TRU-mixed waste. As previously stated, planning for the SARF began in 1985 in order to reduce the external radiation dose to workers during waste handling and repackaging, to enhance safety, and to reduce waste volume and process costs. Initial funding for the SARF was provided in Fiscal Year 1987. The planning and funding for the SARF were initiated prior to the implementation of the 1601 cubic yard volumetric storage limit for TRU-mixed waste that is

contained in a letter dated December 15, 1988, from Thomas P. Looby, Assistant Director for Health and Environmental Protection, Colorado Department of Health. As proposed, the SARF and TWS will reduce the volume of TRU-mixed wastes to be generated at RFP, will reduce the volume of wastes currently being stored, and will help ensure continued compliance with the 1601 cubic yard volumetric storage limitation until alternate storage and/or disposal sites are approved.

Two comments sought the NEPA documentation for alternate near-term storage for RFP TRU-mixed waste that includes both on-site and off-site options. Two comments stated that the proposal for alternative storage should be considered before approving the EA. The response states that separate NEPA documentation for this proposal is being prepared, and will be provided for public review when available.

Storage of RFP wastes at an alternative site was considered as an alternative to supercompacting the wastes. The no action alternative and the no treatment alternative both consider shipment of the wastes offsite for storage and/or disposal without supercompaction. However, shipping the wastes to another site for storage or disposal does not meet the goals of supercompaction, which are: (1) Reduction of worker exposure; (2) volume reduction; and (3) more efficient waste handling methods during storage and transportation.

14.0 Transportation (Three Comments)

One comment questioned the quality of the TRUPACT-II containers for transport of the wastes to WIPP and the acceptability of other containers. The response states that the TRUPACT II container has been certified to comply with U.S. Nuclear Regulatory Commission regulations (10 CFR part 71), which includes meeting acceptable package performance criteria and a quality assurance program. The quality assurance program will detect and require the correction of any defects. With the TRUPACT II available as a shipping package for TRU waste, no alternative containers currently need to be assessed.

In response to one comment, Appendix F reiterates and demonstrates at page 2-54 that the EA has assessed the risks of transporting compacted wastes. In response to a comment regarding rail transportation of wastes to WIPP, the response explains why DOE is committed to using truck transportation during the first five years of waste shipments to WIPP. In regard to the availability and adequacy of

emergency equipment, information contained in the WIPP Supplemental Environmental Impact Statement (SEIS) was referenced and discussed.

15.0 Third Party Oversight (Two Comments)

The commenters stated that there should be third party oversight and monitoring of the proposed action. The response states that the Colorado Department of Health and the Environmental Protection Agency will provide oversight, monitor and audit the proposed action for compliance with RCRA and the RCRA permit. In addition, the proposed action will be required to comply with OSHA requirements, DOE guidelines and internal Rocky Flats Plant audits, quality assurance programs and Standard Operating Procedures.

16.0 Statutory Compliance (Five Comments)

Three of the comments related to RCRA compliance and permit requirements. The responses reiterate that the EPA compatibility chart in 40 CFR part 261, Appendix V, provides the basis for the compatibility of the waste forms to be stored at RFP. The Rocky Flats Plant was generating hazardous wastes at the time RCRA regulations were promulgated in 1980; therefore, RFP is regulated by the interim status standards (40 CFR part 265). When a draft RCRA permit is issued, it will be subject to full public review and comment. The Director of the Colorado Department of Health must allow at least 45 days for public comment, and will schedule a public hearing at his initiative or if requested.

The response to one comment explains DOE's NEPA compliance prior to and during the preparation of the EA and FONSI.

The response to a comment regarding compliance with the Colorado Clean Air Act and the associated regulations states that the SARF and TWS are subject to the requirements of the Act and the associated regulations. Lead, beryllium, mercury, and radionuclides are used at RFP and have been designated as hazardous air pollutants. These substances exist primarily in particulate form and are therefore being collected on HEPA filters. Emissions of volatile organic chemicals are also subject to the air quality regulations.

17.0 Comment Period (Three Comments)

These commenters sought an extension of the public comment period; DOE accordingly extended the public comment period on the EA and

proposed FONSI by 23 days to May 22, 1990.

18.0 Other Issues and Concerns (Six Comments)

In response to one comment, Appendix F at page 2-60 provides a discussion and further definition of the term "transuranic waste."

In response to a comment that the DOE should consider the alternative of halting all warhead production at RFP, Appendix F notes at page 2-60 that nuclear weapons production is authorized by the President of the United States and is beyond the scope of the SARF/TWS project, which is the subject of this EA. However, if nuclear weapons production were halted, the proposed action would be beneficial during decontamination and decommissioning of the site.

In response to a comment suggesting an alternative of operating the proposed facilities elsewhere, the response states that if the proposed action were to be located and operated at WIPP, for example, impacts on the RFP site and the transportation impacts would be the same as for the no action alternative.

In response to other comments, Appendix F confirms at pages 2-60, 2-61, and 2-61, respectively, that the cited average level of plutonium in soils was taken from the WIPP SEIS; the terms "detectable" and "significant" as used in the EA are not synonymous; and DOE concurs that communities located within a 10-mile radius of the Rocky Flats Plant contain a significant population.

[FR Doc. 90-18849 Filed 8-9-90; 8:45 am]

BILLING CODE 6450-01-M

Financial Assistance Award Intent to Award Grant to CLD Technology, Inc.

AGENCY: Department of Energy.

ACTION: Notice of unsolicited assistance award.

SUMMARY: The Department of Energy announces that pursuant to 10 CFR 600.14, it is making a financial assistance award under Grant Number DE-FG01-90CE15415 to CLD Technology, Inc. to extend the CLD scale model to quantify the increase of oil production of steam mixed with a non-condensable gas injected into an oil reservoir.

SCOPE: This grant will aid in providing funding in the amount of \$79,200 to meet the following objectives in the extension of the CLD scale model:

(a) To quantify the increase in oil production, of steam mixed with a non-condensable gas injected into an oil reservoir, that would be obtained by the addition of surfactants to generate a foam,

(b) To simulate in this scale model a specific heavy oil reservoir that is a candidate for thermal stimulation, one that would be available for subsequent field demonstrations, and

(c) To perform a profitability analysis in order to encourage the support of an oil company sponsor in subsequent field demonstrations.

The CLD Technology hold make it possible to operate stripper wells far beyond the previously possible limits of economic recovery and permit the drilling and pumping of may fields that would otherwise be too marginal to exploit. The technology uses injection of steam, surfactants, and non-condensable gas into an oil zone to drive oil through the zone in a production well and sweep it to the recovery well.

ELIGIBILITY: Eligibility of this award is being limited to CLD Technology, Inc. based on acceptance of an unsolicited application. Dr. Todd Doscher, recently deceased, upon whose patents the technology is based, was a world-renowned authority in the field of thermally enhanced oil recovery. Ms. Joyce Kostura, president of CLD Technology, Inc. was Dr. Doscher's colleague and collaborator in CLD Technology, Inc. and co-author of many of his principal technical papers for the last 12 years. Dr. John Patton, is a world-renowned authority in the field of thermally enhanced oil recovery. Dr. Patton, professor and head of the Chemical Engineering Department of New Mexico State University, is the principal investigator of this project. Preliminary tests of this method have produced impressive results: the cost per barrel of oil recovered is considerably less than that of current steam drive technology, and significantly more of the total reserves of oil can be recovered from a field before it must be abandoned. In a test conducted on an abandoned well that had produced only 17 barrels of oil per day, the new method raised that production rate to 72 barrels of oil per day; there was drop from a typical 20 barrels of steam per barrel of oil and to a 5:1 ratio for a period of 13 months before the well was abandoned again. This represents some 30,000 barrels of extra oil recovered after the normal abandonment of this well. In accordance with 10 CFR 600.14(e)(1), it has been determined that this project represents a unique idea that is not eligible for financial assistance under a recent, current, or planned solicitation. The funding program Energy-Related Inventions Program (ERIP), has been structured since its beginning in 1975 to operate without competitive solicitations because the legislation directs ERIP to provide support for

worthy ideas submitted by the public. The proposed project and technology have a strong potential of adding to the national energy resources.

The term of the grant shall be for eighteen (18) months from the effective date of award.

FOR FURTHER INFORMATION CONTACT:

U.S. Department of Energy, Office of Procurement Operations, ATTN: Rosemarie H. Marshall, PR-542, 1000 Independence Avenue, SW., Washington, DC 20585.

Thomas S. Keefe,

Director, Contract Operations Division "B" Office of Procurement Operations.

[FR Doc. 90-18850 Filed 8-9-90; 8:45 am]

BILLING CODE 6450-01-M

Determination of Noncompetitive Financial Assistance

AGENCY: Department of Energy (DOE).

ACTION: Notice.

SUMMARY: DOE announces that pursuant to 10 CFR 600.7(b)(2), it intends to renew on a noncompetitive basis a grant to the Council of Great Lakes Governors (CGLG) to organize and carry out a Regional Biomass Program in the Great Lakes Area of the Northern Tier States.

The grant renewal will continue the project through August 31, 1991. The estimated amount is \$500,000.

Procurement Request No.: 05-900R21390.001.

Project Scope: This grant renewal is to continue a Regional Biomass Program in the Great Lakes Area of the Northern Tier States. The primary purpose is to implement biomass research and development, technology utilization, and technology transfer on a regional basis in a manner which will maximize the participation of the public and private sectors of each state. CGLG has the unique capability to equally represent all of the states in the Great Lakes subregion and involve the appropriate private and public interest groups in the states. CGLG is an existing, regionally organized consortium with background experience in management of similar activities. Eligibility for this award is, therefore, restricted to CGLG.

FOR FURTHER INFORMATION CONTACT:

Lynda H. McLaren, Energy Programs Division, U.S. Department of Energy, Oak Ridge, Tennessee 37831-6269, (615) 576-1763.

Issued in Oak Ridge, Tennessee, on August 1, 1990.

Robert E. Lynch,

Acting Director, Procurement & Contracts Division, Oak Ridge Operations.

[FR Doc. 90-18851 Filed 8-9-90; 8:45 am]

BILLING CODE 6450-01-M

Financial Assistance Award Intent To Award Cooperative Agreement to the Ohio Department of Natural Resources

AGENCY: Department of Energy.

ACTION: Notice of intent to make a noncompetitive financial assistance award.

SUMMARY: DOE announces that, pursuant to 10 CFR 600.7, it is making a noncompetitive financial assistance award under Cooperative Agreement Number DE-FC01-90EI21951 to the Ohio Department of Natural Resources (ODNR) to assist in the revision of the Energy Information Administration's (EIA) Demonstrated Reserve Base (DRB) of coal for the State of Ohio with new quantity and quality data.

Scope: This cooperative agreement will aid in providing funding in the amount of \$80,000 for the development of the minable coal reserve base and recoverable coal in the State of Ohio. This data will be divided by mining method and specified ranges of sulfur and heat content on a county basis.

Eligibility: Eligibility of this award is being limited to the ODNR, based on their responsibility of mapping and estimating the coal resources for the State of Ohio. They are the sole source for over 1,700 new analyses including sulfur contents and heat values. This data will enable ODNR to revise the coal reserves by quality and mining method for the EIA. In accordance with 10 CFR 600.7(b)(2)(i) (B), (C) and (D), it has been determined that (1) Activities would be conducted by ODNR using its own resources; however, DOE support of the activities would enhance the

public benefits to be derived and DOE knows of no other entity which is conducting or planning to conduct such activities; (2) ODNR is a unit of government and the activities to be supported are related to performance of a governmental function within the subject jurisdiction, thereby precluding DOE provision of support to another entity; and (3) ODNR has exclusive domestic capability to perform the activities successfully, based upon technical expertise.

The term of this cooperative agreement shall be for twelve (12) months from the effective date of award.

FOR FURTHER INFORMATION CONTACT: U.S. Department of Energy, Office of Procurement Operations, ATTN: Mr. Steve Witt, PR-542, 1000 Independence Avenue, SW, Washington, DC 20585.

Thomas S. Keefe,

Director, Contract Operations Division "B",
Office of Procurement Operations.

[FR Doc. 90-18852 Filed 8-9-90; 8:45 am]

BILLING CODE 6450-01-M

Office of Fossil Energy

[Docket No. FE C&E 90-15; Certification Notice-63]

Filing Certification of Compliance: Coal Capability of New Electric Powerplant Pursuant to Provisions of the Powerplant and Industrial Fuel Use Act, as Amended.

AGENCY: Office of Fossil Energy,
Department of Energy.

ACTION: Notice of filing.

SUMMARY: Title II of the Powerplant and Industrial Fuel Use Act of 1978, as amended, ("FUA" or "the Act") (42 U.S.C. 8301 *et seq.*) provides that no new electric powerplant may be constructed or operated as a base load powerplant without the capability to use coal or another alternate fuel as a primary energy source (section 201(a), 42 U.S.C. 8311(a), Supp. V. 1987). In order to meet the requirement of coal capability, the owner or operator of any new electric powerplant to be operated as a base load powerplant proposing to use natural gas or petroleum as its primary energy source may certify, pursuant to section 201(d), to the Secretary of Energy prior to construction, or prior to operation as a base load powerplant, that such powerplant has the capability to use coal or another alternate fuel. Such certification establishes compliance with section 201(a) as of the date it is filed with the Secretary. The Secretary is required to publish in the *Federal Register* a notice reciting that the certification has been filed. Two owners and operators of proposed new electric base load powerplants have filed self certifications in accordance with section 201(d).

Further information is provided in the Supplementary Information section below.

SUPPLEMENTARY INFORMATION: The following companies have filed self certifications:

Name	Date received	Type of facility	Megawatt capacity	Location
Oceanside Generating Co., Florham Park, NJ.....	7-30-90	Combined cycle	132	Oceanside, NY.
ENCOGEN Four Partners, L.P., Florham Park, NJ.....	7-30-90	Combined cycle	62	Buffalo, NY.

Amendments to the FUA on May 21, 1987, (Public Law 100-42) altered the general prohibitions to include only new electric base load powerplants and to provide for the self certification procedure.

Copies of this self certification may be reviewed in the Office of Fuels Programs, Fossil Energy, room 3F-056, FE-52, Forrestal Building, 1000 Independence Avenue SW.,

Washington, DC 20585, phone number (202) 586-6769.

Issued in Washington, DC, on August 6, 1990.

Anthony J. Como,

Director, Office of Coal & Electricity, Office of Fuels Programs, Fossil Energy.

[FR Doc. 90-18853 Filed 8-9-90; 8:45 am]

BILLING CODE 6450-01-M

ENVIRONMENTAL PROTECTION AGENCY

[ER-FRL-3819-5]

Environmental Impact Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information (202) 382-5075 or (202) 382-5073.

Availability of Environmental Impact Statements Filed July 30, 1990 Through

August 10, 1990 Pursuant to 40 CFR 1506.9.

EIS No. 900282, Final EIS, SCS, MS, Black Creek Watershed Protection, Flood Prevention and Agricultural Water Management, Implementation and Funding, Holmes County, MS. *Due:* September 04, 1990, *Contact:* Fred Keeter (601) 965-5227.

This Notice of Availability should have appeared in the 07-27-90—Federal Register. The official NEPA review period is calculated from 07-27-90.

EIS No. 900283, Draft EIS, IBR, CA, South Delta Water Management Program, Phase I of Water Banking Program, Implementation, COE Section 10 and 404 Permits, San Joaquin River, San Joaquin Delta, CA. *Due:* November 30, 1990, *Contact:* Wayne Deason (916) 324-9336.

EIS No. 900284, Draft EIS, EPA, LA, Freshwater Bayou Ocean Dredged Material Disposal Site (ODMDS), Designation, Vermillion Parish, LA. *Due:* September 24, 1990, *Contact:* Norm Thomas (214) 655-2260.

EIS No. 900285, Second Draft Supplement, COE, FL, Manatee County Shore Protection Project, Beach Protection Extension and Groins Construction, Manatee County, FL. *Due:* September 24, 1990, *Contact:* Dr. Gerald Atmar (904) 791-2615.

EIS No. 900286, Draft EIS, AFS, CA, Kings River Special Management Area (SMA), South Fork, Middle Fork, Kings Wild and Scenic Rivers, Implementation, Sierra and Sequoia National Forests, King River Ranger and Hume Lake Ranger Districts, Fresno County, CA. *Due:* September 24, 1990, *Contact:* Paul E. Barker (209) 487-5155.

EIS No. 900287, Final EIS, FHW, ME, Topsham-Brunswick Bypass Construction, I-95/196 Interchange to Rt-1, Funding, 404 Permit and Section 9 Permit, Sagadahoc and Cumberland Counties, ME. *Due:* September 10, 1990, *Contact:* William Richardson, Jr. (207) 622-8486.

EIS No. 900288, Final EIS, AFS, UT, Strawberry Valley Management Area Management Plan, Implementation, section 404 Permit, Uinta National Forest, Wasatch County, UT. *Due:* September 10, 1990, *Contact:* Brent G. Spencer (801) 654-0470.

EIS No. 900289, Draft EIS, AFS, MT, Mill-Lion Project Area Timber Sale, Implementation, Lewis and Clark National Forest, Musselshell Ranger District, Meagher County, MT. *Due:* September 24, 1990, *Contact:* David Wanderaas (406) 632-4391.

EIS No. 900290, Final EIS, AFS, CA, Baldy Fire Recovery Project,

Implementation, Klamath National Forest, Happy Camp Ranger District, Siskiyou County, CA. *Due:* September 10, 1990, *Contact:* Lynda Karns (916) 842-6131.

EIS No. 900291, Draft EIS, FHW, WI, WI-TH-54 Improvements, Wisconsin Rapids to U.S. 51 in Plover, Funding, section 404 Permit, City of Wisconsin, Wood and Portage Counties, WI. *Due:* September 24, 1990, *Contact:* Robert W. Cooper (608) 264-5940.

EIS No. 900292, Final Supplement, COE, NJ, Great Egg Harbor Inlet and Peck Beach, Erosion Control and Flood Protection, Implementation, Ocean City, Cape May County, NJ. *Due:* September 10, 1990, *Contact:* Jerry J. Pasquale (212) 597-6840.

EIS No. 900293, Draft EIS, COE, FL, Central and Southern Flood Control Project, Modified Water Deliveries, Implementation, Everglades National Park, Shark River Slough Basin, FL. *Due:* September 24, 1990, *Contact:* Dr. Jonathan D. Moulding (904) 791-2286.

EIS No. 900294, Draft Supplement, FHW, OR, I-84 Widening, NE. 181st Avenue to Sandy River, New Interchange at NE. 207th Ave and Sandy Boulevard to Halsey Street Construction, Additional Information, Funding and 404 Permit, Multnomah County, OR. *Due:* October 04, 1990, *Contact:* Richard Fairbrother (503) 399-5749.

EIS No. 900295, Draft EIS, UAF, CA, Los Angeles Air Force Base Closure and Headquarters Space Systems Division Relocation, Implementation, COE section 404 Permit and EPA NPDES Permit, Los Angeles County, CA. *Due:* September 24, 1990, *Contact:* Ltr. Tom Bartol (714) 382-4891.

EIS No. 900296, Final EIS, AFS, WA, White Pass Ski Area Expansion, Special Use Permit, Wenatchee and Gifford Pinchot National Forests, Lewis and Yakima Counties, WA. *Due:* September 10, 1990, *Contact:* Phillip D. Glass (509) 662-4332.

EIS No. 900297, Final EIS, AFS, OR, Willamette National Forest, Land and Resource Management Plan, Implementation, Clackamas, Lane, Douglas, Jefferson, Linn and Marion Counties, OR. *Due:* September 10, 1990, *Contact:* Rolf Anderson (503) 465-6520.

EIS No. 900298, Draft EIS, AFS, ID, Horizon Forest Resource Area, Timber Sale and Road Construction, Implementation, Idaho Panhandle National Forests, Fernan Ranger District, Kootenai County, ID. *Due:* September 24, 1990, *Contact:* Pat Sheridan (208) 765-7381.

Amended Notices

EIS No. 900271, Final EIS, SFW, NY VT, Lake Champlain Sea Lamprey Control

Temporary Program, Use of Lampricides and an Assessment of Effects on Certain Fish Populations and Sport Fisheries, Implementation, Clinton, Essex and Washington Counties, NY and Addison and Chittenden Counties, VT. *Due:* September 10, 1990, *Contact:* Ralph Abele, Jr. (617) 965-5100. Published FR 7-27-90—Refiled due to noncompliance of distribution. The 30 day NEPA wait period is calculated from 8-10-90.

Dated: August 7, 1990.

William D. Dickerson,
Deputy Director, Office of Federal Activities.
[FR Doc. 90-18860 Filed 8-9-90; 8:45 am]

BILLING CODE 6560-50-M

[ER-FRL-3819-6]

Environmental Impact Statements and Regulations; Availability of EPA Comments

Availability of EPA comments prepared July 23, 1990 Through July 27, 1990 pursuant to the Environmental Review Process (ERP), under section 309 of the Clean Air Act and section 102(2)(c) of the National Environmental Policy Act as amended. Requests for copies of EPA comments can be directed to the Office of Federal Activities at (202) 382-5076.

An explanation of the ratings assigned to draft environmental impact statements (EISs) was published in FR dated April 13, 1990 (55 FR 13949).

Draft EISs

ERP No. D-AFS-G65051-NM, Rating LO, Ward Timber Sale, Implementation, Gila National Forest, Luna Ranger District, Catron County, NM.

Summary:

EPA has no objection to the proposed action as described.

Final EISs

ERP No. F-AFS-L65132-ID, Warm Lake Complex Fire Recovery Project, July Thru August 1989 Warm Lake Complex Fires, Implementation, Boise National Forest, Cascade Ranger District, Valley County, ID.

Summary:

Review of the final EIS has been completed and the project found to be satisfactory.

ERP No. F-USA-C11005-00, Fort Dix Army Base Realignment, Training and Doctrine Command Installations Transfer to other installations including Forts Bliss, Jackson, Knox, Lee, and

Leonard Wood, Implementation, TX, NJ, SC, KY, VA and MD.

Summary:

EPA had requested that the final EIS provide additional information concerning the project's impacts to water quality, air quality, and wetlands. The final EIS contains this information, and EPA has determined that any such impacts will be minor. Accordingly, EPA has no objection to the project and believes that it may be implemented as proposed.

Dated: August 7, 1990.

William D. Dickerson,

Deputy Director, Office of Federal Activities.

[FR Doc. 90-18861 Filed 8-9-90; 8:45 am]

BILLING CODE 6560-50-M

[OPTS-59894; FRL 3796-7]

Toxic and Hazardous Substances; Certain Chemicals Premanufacture Notices

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: Section 5(a)(1) of the Toxic Substances Control Act (TSCA) requires any person who intends to manufacture or import a new chemical substance to submit a premanufacture notice (PMN) to EPA at least 90 days before manufacture or import commences. Statutory requirements for section 5(a)(1) premanufacture notices are discussed in the final rule published in the Federal Register of May 13, 1983 (48 FR 21722). In the Federal Register of November 11, 1984, (49 FR 46066) (40 CFR 723.250), EPA published a rule which granted a limited exemption from certain PMN requirements for certain types of polymers. Notices for such polymers are reviewed by EPA within 21 days of receipt. This notice announces receipt of 8 such PMN(s) and provides a summary of each.

DATES: Close of Review Periods:

Y 90-241, July 15, 1990.

Y 90-252, August 7, 1990.

Y 90-253, July 30, 1990.

Y 90-254, 90-255, 90-256, August 12, 1990.

Y 90-257, August 14, 1990.

Y 90-258, August 16, 1990.

FOR FURTHER INFORMATION CONTACT:

Michael M. Stahl, Director, Environmental Assistance Division (TS-799), Office of Toxic Substances, Environmental Protection Agency, Room E-545, 401 M Street, SW., Washington, DC 20460, (202) 554-1404, TDD (202) 554-0551.

SUPPLEMENTARY INFORMATION: The following notice contains information extracted from the nonconfidential version of the submission provided by the manufacturer on the PMNs received by EPA. The complete nonconfidential document is available in the Public Reading Room NE-C004 at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday, excluding legal holidays.

Y 90-241

Manufacturer. Confidential.

Chemical. (G) Acrylic polymer.

Use/Production. (G) Open, dispersive use. Prod. range: Confidential.

Y 90-252

Importer. Nachem Inc.

Chemical. (G) Photo polymer based on dimethylmalein-imide system.

Use/Import. (G) Copolymer for coating of metal plates. Import range: Confidential.

Y 90-253

Manufacturer. Confidential.

Chemical. (G) Modified ethylene-vinyl acetate copolymer.

Use/Production. (G) Destructive use. Prod. range: Confidential.

Y 90-254

Manufacturer. Confidential.

Chemical. (G) Carboxylated acrylic copolymer.

Use/Production. (G) Pressure sensitive adhesive. Prod. range: Confidential.

Y 90-255

Manufacturer. Inovative Polymers Ltd.

Chemical. (S) Maleic anhydride; butyl acrylate; vinyl acetate; mono ethanol amine; 2,2' azo bis-(2-methyl propanenitrile).

Use/Production. (G) Pressure sensitive adhesive. Prod. range: 2,500-5,000 kg/yr.

Y 90-256

Manufacturer. Inovative Polymers Ltd.

Chemical. (S) Maleic anhydride; butyl acrylate; vinyl acetate; mono ethanol amine; 2,2' azo bis-(2-methyl propanenitrile).

Use/Production. (G) Pressure sensitive adhesive. Prod. range: Confidential.

Y 90-257

Manufacturer. Akzo-LaChem.

Chemical. (G) Polyurethane polyol. *Use/Production.* (S) Resin used to manufacture industrial coatings. Prod. range: Confidential.

Y 90-258

Manufacturer. Confidential.

Chemical. (G) Ethylene polymer.

Use/Production. (S) Tie coat for coextruded films. Prod. range: Confidential.

Dated: August 6, 1990.

Steve Newburg-Rinn,

Acting Director, Information Management Division, Office of Toxic Substances.

[FR Doc. 90-18846 Filed 8-9-90; 8:45 am]

BILLING CODE 6560-50-F

FEDERAL EMERGENCY MANAGEMENT AGENCY

[FEMA-871-DR]

Amendment to Notice of a Major Disaster Declaration; Illinois

AGENCY: Federal Emergency Management Agency.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster for the State of Illinois (FEMA-871-DR), dated June 22, 1990, and related determinations.

DATED: August 2, 1990.

FOR FURTHER INFORMATION CONTACT:

Neva K. Elliott, Disaster Assistance Programs, Federal Emergency Management Agency, Washington, DC 20472 (202) 646-3614.

Notice: The notice of a major disaster for the State of Illinois, dated June 22, 1990, is hereby amended to include the following areas among those areas determined to have been adversely affected by the catastrophe declared a major disaster by the President in his declaration of June 22, 1990:

The counties of Calhoun and Hamilton for Individual Assistance and Public Assistance. (Catalog of Federal Domestic Assistance No. 83.516, Disaster Assistance.)

Grant C. Peterson,

Associate Director, State and Local Programs and Support, Federal Emergency Management Agency.

[FR Doc. 90-18822 Filed 8-9-90; 8:45 am]

BILLING CODE 6718-02-M

[FEMA-873-DR]

Amendment to Notice of a Major Disaster Declaration; Nebraska

AGENCY: Federal Emergency Management Agency.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster for the State of Nebraska (FEMA-873-DR), dated July 4, 1990, and related determinations.

DATED: July 30, 1990.

FOR FURTHER INFORMATION CONTACT: Neva K. Elliott, Disaster Assistance Programs, Federal Emergency Management Agency, Washington, DC 20472 (202) 646-3614.

Notice: Notice is hereby given that the incident period for this disaster is closed effective July 30, 1990.

(Catalog of Federal Domestic Assistance No. 83.516, Disaster Assistance.)

Grant C. Peterson,

Associate Director, State and Local Programs and Support, Federal Emergency Management Agency.

[FR Doc. 90-18823 Filed 8-9-90; 8:45 am]

BILLING CODE 6718-01-M

[FEMA-873-DR]

Amendment to Notice of a Major Disaster Declaration; Vermont

AGENCY: Federal Emergency Management Agency.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster for the State of Vermont (FEMA-875-DR), dated July 4, 1990, and related determinations.

DATED: August 3, 1990.

FOR FURTHER INFORMATION CONTACT: Neva K. Elliott, Disaster Assistance Programs, Federal Emergency Management Agency, Washington, DC 20472, DC 20472 (202) 646-3614.

Notice: Notice is hereby given that the incident period for this disaster is amended to be July 4, 1990, through and including July 23, 1990.

(Catalog of Federal Domestic Assistance No. 83.516, Disaster Assistance.)

Grant C. Peterson,

Associate Director, State and Local Programs and Support, Federal Emergency Management Agency.

[FR Doc. 90-18824 Filed 8-9-90; 8:45 am]

BILLING CODE 6718-01-M

[FEMA-874-DR]

Amendment to Notice of a Major Disaster Declaration; Wisconsin

AGENCY: Federal Emergency Management Agency.

ACTION: Notice.

SUMMARY: This notice amends the notice of a major disaster for the State of Wisconsin (FEMA-874-DR), dated July 13, 1990, and related determinations.

DATED: August 1, 1990.

FOR FURTHER INFORMATION CONTACT: Neva K. Elliott, Disaster Assistance Programs, Federal Emergency

Management Agency, Washington, DC 20472 (202) 646-3614.

Notice: The notice of a major disaster for the State of Wisconsin, dated July 13, 1990, is hereby amended to include the following areas among those areas determined to have been adversely affected by the catastrophe declared a major disaster by the President in his declaration of July 13, 1990:

The counties of Manitowoc and Winnebago for Individual Assistance.

(Catalog of Federal Domestic Assistance No. 83.516, Disaster Assistance.)

Grant C. Peterson,

Associate Director, State and Local Programs and Support, Federal Emergency Management Agency.

[FR Doc. 90-18825 Filed 8-9-90; 8:45 am]

BILLING CODE 6718-02-M

FEDERAL MARITIME COMMISSION

Notice of Item Submitted for OMB Review

The Federal Maritime Commission hereby gives notice that the following item has been submitted to OMB for review pursuant to the Paperwork Reduction Act of 1980 (44 U.S.C. 3601, *et seq.*). Requests for information, including copies of the collection of information and supporting documentation, may be obtained from John Robert Ewers, Director, Bureau of Administration, Federal Maritime Commission, 1100 L Street, NW., room 12211, Washington, DC 20573, telephone number (202) 523-5866. Comments may be submitted to the agency and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, Attention: Desk Officer for the Federal Maritime Commission, within 15 days after the date of the Federal Register in which this notice appears.

Summary of Item Submitted for OMB Review

46 CFR Part 530

FMC requests extension of clearance for 46 CFR Part 530 which provides procedures for the expeditious processing by terminals of trucks laden with cargo for vessels to reduce congestion and delay in the Port of New York. The Commission estimates a respondent universe of 10 with an estimated 10 annual responses and 20 manhour burden. Total cost to the Federal Government is estimated at \$129.00; total cost to respondents is estimated at \$346.00.

Joseph C. Polking,

Secretary.

[FR Doc. 90-18751 Filed 8-9-90; 8:45am]

BILLING CODE 6730-01-M

Notice of Agreement(s) Filed

The Federal Maritime Commission hereby gives notice that the following agreement(s) has been filed with the Commission pursuant to section 15 of the Shipping Act, 1916, and section 5 of the Shipping Act of 1984.

Interested parties may inspect and obtain a copy of each agreement at the Washington, DC Office of the Federal Maritime Commission, 1100 L Street NW., room 10220. Interested parties may submit protests or comments on each agreement to the Secretary, Federal Maritime Commission, Washington, DC 20573, within 10 days after the date of the Federal Register in which this notice appears. The requirements for comments and protests are found in §§ 560.602 and/or 572.603 of title 46 of the Code of Federal Regulations. Interested persons should consult this section before communicating with the Commission regarding a pending agreement.

Any person filing a comment or protest with the Commission shall, at the same time, deliver a copy of that document to the person filing the agreement at the address shown below.

Agreement No.: 224-001953-008.

Title: Port of Oakland/Matson Terminals, Inc., Terminal Agreement.

Parties: Port of Oakland, Matson Terminals, Inc.

Filing Party: Mr. John E. Nolan, Assistant Port Attorney, Port of Oakland, 530 Water Street, Oakland, CA 94607.

Synopsis: The Agreement amends the parties' basic agreement to provide for: (1) Matson's performance of certain repair maintenance work subject to the Port's reimbursement to Matson for the cost thereof; (2) the Port's performance of certain restoration necessitated by the earthquake damage subject to Matson's reimbursement to the Port of a portion of the cost thereof; (3) and the deletion of a 0.0054 acre area from the demised premises.

Agreement No.: 224-200400.

Title: Port of Houston Authority/Fairway Terminal, Corporation Terminal Agreement.

Parties: Port of Houston Authority (Port), Fairway Terminal Corporation (Fairway).

Filing Party: Ms. Martha T. Williams, Port of Houston Authority, P.O. Box 2562, Houston, TX 77252-2562.

Synopsis: The Agreement assigns Fairway to perform or have performed public freight handling services at the Port's Wharves and Transit Sheds Number 27, in accordance with the

Port's Tariff FMC No. 8. The term of the Agreement ends December 31, 1990.

Dated: August 6, 1990.

By Order of the Federal Maritime Commission.

Joseph C. Polking,
Secretary.

[FR Doc. 90-18748 Filed 8-8-90; 8:45 am]

BILLING CODE 6730-01-M

Notice of Agreement(s) Filed

The Federal Maritime Commission hereby gives notice of the filing of the following agreement(s) pursuant to section 5 of the Shipping Act of 1984.

Interested parties may inspect and obtain a copy of each agreement at the Washington, DC Office of the Federal Maritime Commission, 1100 L Street, NW., room 10220. Interested parties may submit comments on each agreement to the Secretary, Federal Maritime Commission, Washington, DC 20573, within 10 days after the date of the **Federal Register** in which this notice appears. The requirements for comments are found in § 572.603 of title 46 of the Code of Federal Regulations. Interested persons should consult this section before communicating with the Commission regarding a pending agreement.

Agreement No.: 224-010774-009.

Title: Georgia Ports Authority/ Evergreen Marine Corporation (Taiwan), Ltd. Terminal Agreement.

Parties: Georgia Ports Authority, Evergreen Marine Corporation (Taiwan), Ltd.

Synopsis: The Agreement amends the parties' basic agreement to extend the agreement through September 30, 1990.

Dated: August 6, 1990.

By Order of the Federal Maritime Commission.

Joseph C. Polking,
Secretary.

[FR Doc. 90-18749 Filed 8-9-90; 8:45 am]

BILLING CODE 6730-01-M

Notice of Agreement(s) Filed

The Federal Maritime Commission hereby gives notice of the filing of the following agreement(s) pursuant to section 5 of the Shipping Act of 1984.

Interested parties may inspect and obtain a copy of each agreement at the Washington, DC Office of the Federal Maritime Commission, 1100 L Street, NW., room 10220. Interested parties may submit comments on each agreement to the Secretary, Federal Maritime

Commission, Washington, DC 20573, within 10 days after the date of the **Federal Register** in which this notice appears. The requirements for comments are found in § 572.603 of title 46 of the Code of Federal Regulations. Interested persons should consult this section before communicating with the Commission regarding a pending agreement.

Agreement No.: 224-200398.

Title: Port of Portland/Nippon Yusen Kaisha, Ltd. (NYK) Terminal Agreement.

Parties: Port of Portland (Port), Nippon Yusen Kaisha, Ltd. (NYK).

Synopsis: The Agreement provides that NYK, in conjunction with its joint service with Hyundai Merchant Marine, Co., Ltd., will make a minimum of 17 vessel calls at the Port and provide a minimum throughput of 6,700 containers. In return, the Port will provide NYK with the preferential use of a container yard area, a vessel berth and two container cranes. NYK will pay a wharfage and dockage rate of \$42 per container for the first 6,700 containers, with reduced rates to apply after that volume is attained. The term of the Agreement is through November 30, 1990.

Agreement No.: 224-200399.

Title: Port of Portland/Hyundai Merchant Marine Co., Ltd. Terminal Agreement.

Parties: Port of Portland (Port), Hyundai Merchant Marine, Co., Ltd. (HMMC).

Synopsis: The Agreement provides that HMMC, in conjunction with its joint service with Nippon Yusen Kaisha, Ltd., agrees to make a minimum of 17 vessel calls at the Port and provide a minimum throughput of 6,700 containers. In return, the Port will provide HMMC with the preferential use of a container yard area, a vessel berth and two container cranes. HMMC will pay a wharfage and dockage rate of \$42 per container for the first 6,700 containers, with reduced rates to apply after that volume is attained. The Agreement's term is through November 30, 1990.

Dated: August 6, 1990.

By Order of the Federal Maritime Commission.

Joseph C. Polking,
Secretary.

[FR Doc. 90-18750 Filed 8-9-90; 8:45 am]

BILLING CODE 6730-01-M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Office of the Secretary

Agency Forms Submitted to the Office of Management and Budget for Clearance

On Fridays, the Department of Health and Human Services, Office of the Secretary publishes a list of information collections it has submitted to the Office of Management and Budget (OMB) for clearance in compliance with the Paperwork Reduction Act (44 U.S.C. chapter 35). The following are those information collections recently submitted to OMB.

1. *Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments* (45 CFR part 92)—0990-0169—Extension of Existing Requirements with no Change—Pre-award, post-award, and after-the-fact reporting and recordkeeping requirements are necessary to award, monitor, close out and manage grants programs to State and Local governments, and to ensure minimum fiscal control and accountability for Federal funds, and to deter fraud, waste, and abuse. *Respondents:* State and local governments; *Number of Respondents:* 4,000; *Average Annual Burden per Respondent:* 70 hours; *Total Annual Burden:* 280,000 hours.

2. *Survey of Portable X-Ray Suppliers—New—The Omnibus Budget Reconciliation Act of 1989* requires the Department to conduct a study to determine costs and payments for portable X-ray services provided under Medicare Part B. The Office of the Inspector General will survey a sample of portable X-ray suppliers to gather the necessary data. *Respondents:* portable X-ray suppliers; *Number of Respondents:* 125; *Frequency of Response:* one time; *Average Burden per Response:* 4 hours; *Total Burden:* 500 hours.

OMB Desk Officer: Allison Herron.

Copies of the information collection packages listed above can be obtained by calling the OS Reports Clearance Officer on (202) 619-0511. Written comments and recommendations for the proposed information collection should be sent directly to the OMB desk officer designated above at the following address:

OMB Reports Management Branch, New Executive Office Building, Room 3208 Washington, DC 20503

Dated: July 27, 1990.

James F. Trickett,
Deputy Assistant Secretary for Management and Acquisition.

[FR Doc. 90-18324 Filed 8-9-90; 8:45 am]

BILLING CODE 4150-04-M

Alcohol, Drug Abuse, and Mental Health Administration

Advisory Committee Meetings in September

AGENCY: Alcohol, Drug Abuse, and Mental Health Administration, HHS.

ACTION: Notice of meetings.

SUMMARY: This notice sets forth the schedule and proposed agendas of the forthcoming meetings of the agency's advisory committees in the month of September 1990.

The National Advisory Councils will discuss policy, program, and other issues of importance to the Institutes, as well as perform review of applications for Federal assistance. Therefore, portions of the meetings will be closed to the public as determined by the Administrator, ADAMHA, in accordance with 5 U.S.C. 552(b)(6) and 5 U.S.C. app. 2 10(d).

Notice of these meetings is required under the Federal Advisory Committee Act, Public Law 92-463.

Committee name: National Advisory Council on Alcohol Abuse and Alcoholism, NIAAA.

Date and time: September 10-11: 10:15 a.m.

Place: National Institutes of Health, 9000 Rockville Pike, Bethesda, MD 20892—Building #1, 3rd Floor, Wilson Hall on September 10 and Building #31, 6th Floor, Conference Room 7 on September 11.

Status of meeting: Open—September 10: 10:15 a.m.—5 p.m. Closed—Otherwise.

Contact: James Vaughan, Room 16C-20, Parklawn Building, 5600 Fishers Lane, Rockville, MD 20857, (301) 443-4375.

Purpose: The Council advises the Secretary, Department of Health and Human Services regarding policy direction and program issues of national significance in the area of alcohol abuse and alcoholism. Reviews all grant applications submitted, evaluates these applications in terms of scientific merit and adherence to Department policies, and makes recommendations to the Secretary with respect to approval and amount of award.

Committee name: National Advisory Council on Drug Abuse, NIDA.

Date and time: September 11-12: 9 a.m.

Place: National Institutes of Health, Building 31C, Conference Room 9, 9000 Rockville Pike, Bethesda, MD 20892.

Status of meeting: Open—September 11: 9 a.m.—1 p.m.; September 12: 9 a.m.—5 p.m. Closed—Otherwise.

Contact: Sheila Gardner, Room 10-05, Parklawn Building, 5600 Fishers Lane, Rockville, MD 20857, (301) 443-0441.

Purpose: The National Advisory Council on Drug Abuse advises and makes recommendations to the Secretary, Department of Health and Human Services, the Administrator, Alcohol, Drug Abuse, and Mental Health Administration, and the Director, National Institute on Drug Abuse on the development of new initiatives and priorities and the efficient administration of drug abuse research, including prevention and treatment research, and research training. The Council also gives advice on policies and priorities for drug abuse grants and contracts, and reviews and makes final recommendations on grant applications.

Committee name: National Advisory Mental Health Council, NIMH.

Date and time: September 17-18: 9:00 a.m.

Place: National Institutes of Health, Building 1, 3rd Floor, Wilson Hall, 9000 Rockville Pike, Bethesda, MD 20892.

Status of meeting: Open—September 18: 9 a.m.—5 p.m. Closed—Otherwise.

Contact: Eleanor C. Friedenberg, Room 9-105, Parklawn Building, 5600 Fishers Lane, Rockville, MD 20857, (301) 443-3367.

Purpose: The National Advisory Mental Health Council advises the Secretary of Health and Human Services, the Administrator, Alcohol, Drug Abuse, and Mental Health Administration, and the Director, National Institute of Mental Health regarding policies and programs of the Department in the field of mental health. The Council reviews applications for grants-in-aid relating to research and training in the field of mental health and makes recommendations to the Secretary with respect to approval of applications for, and amount of, these grants.

Substantive information, summaries of the meetings, and rosters of committee members may be obtained as follows: Ms Diana Widner, NIAAA Committee Management Officer, Room 16C-20, (301) 443-4375; Ms. Camilla

Holland, NIDA Committee Management Officer, Room 10-42, (301) 443-2755; Ms. Joanna Kieffer, NIMH Committee Management Officer, Room 9-105, (301) 443-4333. The mailing address for the above parties is: Parklawn Building, 5600 Fishers Lane, Rockville, Maryland 20857.

Dated: August 6, 1990.

Peggy W. Cockrill,

Committee Management Officer, Alcohol, Drug Abuse, and Mental Health Administration.

[FR Doc. 90-18803 Filed 8-9-90; 8:45 am]

BILLING CODE 4160-20-M

Family Support Administration

Forms Submitted to the Office of Management and Budget for Clearance

The Family Support Administration (FSA) will publish on Fridays information collection packages submitted to the Office of Management and Budget (OMB) for clearance, in compliance with the Paperwork Reduction Act (44 U.S.C. chapter 35). Following is the Federal Register submission for FSA.

(For a copy of a package, call the FSA, Report Clearance Officer 202-252-5604)

Annual Services Plan—FSA 110—In order to meet the requirements of 400.11, States are required to submit an Annual Services Plan which describes the efforts and funds devoted to addressing the Congressional intent of placing refugees in jobs as soon as possible after their arrival in the U.S.
Respondents: State or local governments; **Number of Respondents:** 51; **Frequency of Response:** Annual; **Average Burden per Response:** 1 hour; **Estimated Annual Burden:** 51 hours.

OMB Desk Clearance Officer: Shannah Rose McCallum.

Written comments and recommendations for the proposed information collection should be sent directly to the appropriate OMB Desk Officer designated above at the following address:

OMB Reports Management Branch, New Executive Office Building, room 3201, 725 17th Street, NW., Washington, DC 20503.

Dated: July 29, 1990.

Naomi B. Marr,

Associate Administrator, Office of Management & Information Systems.

[FR Doc. 90-18450 Filed 8-9-90; 8:45 am]

BILLING CODE 4150-04-M

Food and Drug Administration

[Docket No. 90N-0259]

Drug Export; Nicotinamide Gel**AGENCY:** Food and Drug Administration, HHS.**ACTION:** Notice.

SUMMARY: The Food and Drug Administration (FDA) is announcing that GenDerm Corp. has filed an application requesting approval for the export of the human drug Nicotinamide Gel to Canada.

ADDRESSES: Relevant information on this application may be directed to the Dockets Management Branch (HFA-305), Food and Drug Administration, Rm. 4-62, 5600 Fishers Lane, Rockville, MD 20857, and to the contact person identified below. Any future inquiries concerning the export of human drugs under the Drug Export Amendments Act of 1986 should also be directed to the contact person.

FOR FURTHER INFORMATION CONTACT: Frank R. Fazzari, Division of Drug Labeling Compliance (HFD-313), Center for Drug Evaluation and Research, Food and Drug Administration, 5600 Fishers Lane, Rockville, MD 20857, 301-295-8073.

SUPPLEMENTARY INFORMATION: The drug export provisions in section 802 of the Federal Food, Drug, and Cosmetic Act (the act) (21 U.S.C. 382) provide that FDA may approve applications for the export of drugs that are not currently approved in the United States. Section 802(b)(3)(B) of the act sets forth the requirements that must be met in an application for approval. Section 802(b)(3)(C) of the act requires that the agency review the application within 30 days of its filing to determine whether the requirements of section 802(b)(3)(B) have been satisfied. Section 802(b)(3)(A) of the act requires that the agency publish a notice in the *Federal Register* within 10 days of the filing of an application for export to facilitate public participation in its review of the application. To meet this requirement, the agency is providing notice that GenDerm Corp., 452 Huehl Rd., Northbrook, IL 60062, has filed an application requesting approval for the export of the drug Nicotinamide Gel, to Canada. This product is to be used as a topical treatment for acne vulgaris. The application was received and filed in the Center for Drug Evaluation and Research on June 28, 1990, which shall be considered the filing date for the purpose of the act.

Interested persons may submit

relevant information on the application to the Dockets Management Branch (address above) in two copies (except that individuals may submit single copies) and identified with the docket number found in brackets in the heading of this document. These submissions may be seen in the Dockets Management Branch between 9 a.m. and 4 p.m., Monday through Friday.

The agency encourages any person who submits relevant information on the application to do so by August 20, 1990, and to provide an additional copy of the submission directly to the contact person identified above, to facilitate consideration of the information during the 30-day review period.

This notice is issued under the Federal Food, Drug, and Cosmetic Act (section 802 (21 U.S.C. 382)) and under authority delegated to the Commissioner of Food and Drugs (21 CFR 5.10) and redelegated to the Center for Drug Evaluation and Research (21 CFR 5.44).

Dated: August 3, 1990.

Sammie R. Young,

Deputy Director, Office of Compliance, Center for Drug Evaluation and Research.

[FR Doc. 90-18802 Filed 8-9-90; 8:45 am]

BILLING CODE 4160-01-M

Health Care Financing Administration**Medicare and Medicaid Programs; Meeting of the Advisory Council on Social Security**

AGENCY: Health Care Financing Administration (HCFA), HHS.

ACTION: Notice of public hearing.

SUMMARY: Accordance with section 10(a) of the Federal Advisory Committee Act, this notice announces a hearing of the Advisory Council on Social Security.

DATES: The hearing will be open to the public on August 17, 1990 from 11 a.m. to 4 p.m.

ADDRESSES: American United Life Tower, 1 American Square, Indianapolis, Indiana 46204, First floor; Main Auditorium, or

FOR FURTHER INFORMATION CONTACT: Olga Nelson, Administrative Officer, Advisory Council on Social Security, room 638 G, Hubert H. Humphrey Building, 200 Independence Avenue, SW., Washington, DC 20201, 202-245-0217.

SUPPLEMENTARY INFORMATION:**I. Purpose**

Under section 706 of the Social Security Act (the Act), the Secretary of Health and Human Services (the

Secretary) appoints the Council every four years. The Council examines issues affecting the Social Security retirement, disability, and survivors insurance programs, as well as the Medicare and Medicaid programs, which were created under the Act.

In addition, the Secretary has asked the Council specifically to address the following:

- The adequacy of the Medicare program to meet the health and long-term care needs of our aged and disabled populations, the impact on Medicaid of the current financing structure for long-term care, and the need for more stable health care financing for the aged, the disabled, the poor, and the uninsured;

- Major Old-Age, Survivors, and Disability Insurance (OASDI) financing issues, including the long-range financial status of the program, relationship of OASDI income and outgo to budget-deficit reduction efforts under the Balanced Budget and Emergency Deficit Control Act of 1985, the projected buildups in the OASDI trust funds; and

- Broad policy issues in Social Security, such as the role of Social Security in overall U.S. retirement income policy.

The Council is composed of 12 members: G. Lawrence Atkins, Robert M. Ball, Philip Briggs, Lonnie R. Bristow, Theodore Cooper, John T. Dunlop, Karen Ignagni, James R. Jones, Paul O'Neill, A. L. "Pete" Singleton, John J. Sweeney, and Don C. Wegmiller. The chairperson is Deborah Steelman.

The Council is to report to the Secretary and Congress by January 1991.

II. Agenda

The Council will hear testimony on the interim report on Social Security and its relationship to the Federal budget; other aspects of the social security programs; and issues and options related to health care financing reforms; including long term care.

The agenda items are subject to change as priorities dictate.

[Catalog of Federal Domestic Assistance Programs Nos. 13.714 Medical Assistance Program; 13.733 Medicare-Hospital Insurance; 13.774 Medicare-Supplementary Medical Insurance; 13.802, Social Security-Disability Insurance; 13.803 Social Security-Retirement Insurance; 13.805 Social Security-Survivor's Insurance]

Dated: August 6, 1990.

Ann D. LaBelle,

Executive Director, Advisory Council on Social Security.

[FR Doc. 90-18747 Filed 8-9-90; 8:45 am]

BILLING CODE 4120-93-M

National Institutes of Health**Meeting of the Language Subcommittee of the National Deafness and Other Communication Disorders Advisory Board**

Pursuant to Public Law 92-463, notice is hereby given of the meeting of the Language Subcommittee of the National Deafness and Other Communication Disorders Advisory Board on September 18, 1990. The meeting will take place from 8:30 a.m. to 12 noon in Conference Room 4, Building 31A, National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland 20892.

The meeting, which will be open to the public, is being held to compare the language research portfolio of the National Institute on Deafness and Other Communication Disorders to the National Strategic Research Plan to (1) identify changes in the field since the National Strategic Research Plan was developed; (2) recommend levels and areas of research activity; and (3) recommend potential initiatives. Attendance by the public will be limited to space available.

Summaries of the subcommittee's meeting and a roster of participants may be obtained from Mrs. Monica Davies, National Institute on Deafness and Other Communication Disorders, Building 31, Room B2C06, National Institutes of Health, Bethesda, Maryland 20892, 301-402-1129, upon request.

Dated: August 6, 1990.

Betty J. Beveridge,

Committee on Management Officer, NIH.

[FR Doc. 90-18774 Filed 8-9-90; 8:45 am]

BILLING CODE 4140-01-M

Social Security Administration**Agency Forms Submitted to the Office of Management and Budget for Clearance**

Each Friday the Social Security Administration publishes a list of information collection packages that have been submitted to the Office of Management and Budget (OMB) for clearance in compliance with Public Law 96-511, The Paperwork Reduction Act. The following clearance packages have been submitted to OMB since the last list was published in the *Federal Register* on June 29, 1990.

(Call Reports Clearance Officer on (301) 965-4149 for copies of package)

1. Report of Black Lung Student Beneficiary At End of School Year—0960-0322—The information collected on the form SSA-2613 is used by the Social Security Administration to assure

continuation of student's benefits to an entitled child of a miner. The affected public is comprised of individuals who wish to have their student's benefits continued and school officials.

Number of Respondents: 8,000.

Frequency of Response: 1.

Average Burden Per Response: 7.5 minutes.

Estimated Annual Burden: 1,000 hours.

2. Reporting Changes That Affect Your Social Security Payment—0960-0073—

The information collected on form SSA-1425 is used by the Social Security Administration to determine if a beneficiary can continue to be entitled to benefits or whether the benefit amount should be modified. The respondents are beneficiaries reporting events which could affect payment.

Number of Respondents: 70,000.

Frequency of Response: 1.

Average Burden Per Response: 5 minutes.

Estimated Annual Burden: 5,833 hours.

3. Questionnaires for Test 5 of the Personal Earnings and Benefit Estimate Statement Project—0960-NEW—The information on these three questionnaires will be used by the Social Security Administration (SSA) to plan for the effective implementation of the mandatory provision of statements part of Section 1142 of the Social Security Act. The respondents will consist of selected non-beneficiaries who have earnings posted to SSA's records.

Number of Respondents: 5,200.

Frequency of Response: 1.

Average Burden Per Response: 15 minutes.

Estimated Annual Burden: 1,300 hours.

4. Student Reporting Form—0960-0088—The information on form SSA-1388 is used by the Social Security Administration to determine the continuing entitlement of student beneficiaries who report a change which may affect those benefits.

Number of Respondents: 75,000.

Frequency of Response: 1.

Average Burden Per Response: 6 minutes.

Estimated Annual Burden: 7,500 hours.

5. Black Lung Student's Statement Regarding School Attendance—0960-0314—The information on form SSA-2602 is used by the Social Security Administration to determine whether or not a student beneficiary has resumed full-time school attendance after the end of the regular school year and is therefore entitled to additional benefits. The respondents are students who are children of deceased coal miners and officials of the schools they attend.

Number of Respondents: 6,000.

Frequency of Response: 1.

Average Burden Per Response: 5 minutes.

Estimated Annual Burden: 500 hours.

OMB Desk Officer: Allison Herron.

Written comments and recommendations regarding these information collections should be sent directly to the appropriate OMB Desk Officer designated above at the following address:

OMB Reports Management Branch, New Executive Office Building, room 3208, Washington, DC 20503.

Dated: August 6, 1990.

Ron Compston,

Social Security Administration, Reports Clearance Officer.

[FR Doc. 90-18742 Filed 8-9-90; 8:45 am]

BILLING CODE 4190-11-M

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT**Office of the Assistant Secretary for Community Planning and Development**

[Docket No. R-90-1917; FR-2606-N-84]

Federal Property Suitable as Facilities to Assist the Homeless

AGENCY: Office of the Assistant Secretary for Community Planning and Development, HUD.

ACTION: Notice.

SUMMARY: This Notice identifies unutilized and underutilized Federal property determined by HUD to be suitable for possible use for facilities to assist the homeless.

EFFECTIVE DATE: August 10, 1990.

ADDRESSES: For further information, contact James Forsberg, room 7262, Department of Housing and Urban Development, 451 Seventh Street SW., Washington, DC 20410; telephone (202) 708-4300; TDD number for the hearing- and speech-impaired (202) 708-2565. (These telephone numbers are not toll-free.)

SUPPLEMENTARY INFORMATION: In accordance with the December 12, 1988 Court Order in *National Coalition for the Homeless v. Veterans Administration*, No. 88-2503-OG (D.D.C.), HUD is publishing this Notice to identify Federal buildings and real property that HUD has determined are suitable for use for facilities to assist the homeless. The properties were identified from information provided to HUD by Federal landholding agencies regarding unutilized and underutilized buildings and real property controlled by such agencies or by GSA regarding its

inventory of excess of surplus Federal property.

The Order requires HUD to take certain steps to implement section 501 of the Stewart B. McKinney Homeless Assistance Act (42 U.S.C. 11411), which sets out a process by which unutilized or underutilized Federal properties may be made available to the homeless. Under section 501(a), HUD is to collect information from Federal landholding agencies about such properties and then to determine, under criteria developed in consultation with the Department of Health and Human Services (HHS) and the Administrator of General Services (GSA), which of those properties are suitable for facilities to assist the homeless. The Order requires HUD to publish, on a weekly basis, a Notice in the *Federal Register* identifying the properties determined as suitable.

The properties identified in this Notice may ultimately be available for use by the homeless, but they are first subject to review by the landholding agencies pursuant to the court's Memorandum of December 14, 1988 and section 501(b) of the McKinney Act. Section 501(b) requires HUD to notify each Federal agency about any property of such agency that has been identified as suitable. Within 30 days from receipt of such notice from HUD, the agency must transmit to HUD: (1) Its intention to declare the property excess to the agency's need or to make the property available on an interim basis for use as facilities to assist the homeless; or (2) a statement of the reasons that the property cannot be declared excess or made available on an interim basis for use as facilities to assist the homeless.

First, if the landholding agency decides that the property cannot be declared excess or made available to the homeless for use on an interim basis the property will no longer be available.

Second, if the landholding agency declares the property excess to the agency's need, that property may, if subsequently accepted as excess by GSA, be made available for use by the homeless in accordance with applicable law and the December 12, 1988 Order and December 14, 1988 Memorandum, subject to screening for other Federal use.

Homeless assistance providers interested in any property identified as suitable in this Notice should send a written expression of interest to HHS, addressed to Judy Breitman, Division of Health Facilities Planning, U.S. Public Health Service, HHS, room 17A-10, 5600 Fishers Lane, Rockville, MD 20857; (301) 443-2265. (This is not a toll-free number.) HHS will mail the interested

provider an application packet, which will include instructions for completing the application. In order to maximize the opportunity to utilize a suitable property, providers should submit such written expressions of interest within 30 days from the date of this Notice. For complete details concerning the timing and processing of applications, the reader is encouraged to refer to HUD's *Federal Register* Notice on June 23, 1989 (54 FR 26421), as corrected on July 3, 1989 (54 FR 27975).

For more information regarding particular properties identified in this Notice (i.e., acreage, floor plan, existing sanitary facilities, exact street address), providers should contact the appropriate landholding agencies at the following address: *U.S. Army: HQ-DA, Attn: DAEN-ZCI-P-Robert Conte; room 1E671 Pentagon, Washington, DC 20360-2600; (202) 693-4583; Dept. of Agriculture: Marsha Pruitt, USDA, 14th and Independence Avenue SW., South Bldg., room 1566, Washington, DC 20250; (202) 447-3338; Dept. of Energy: Tom Knox, Facility Management Specialist, MA222, room 5B020, 1000 Independence Ave. SW., Washington, DC 20303; (202) 586-1191; Dept. of Interior: Lola D. Knight, Department of Interior, 18th and C Sts. NW., Mailstop 5512, Washington, DC 20240; (202) 343-2704. (These are not toll-free numbers.)*

Dated: August 3, 1990.

Paul Roitman Bardack,

Deputy Assistant Secretary for Economic Development.

Suitable Land (by State)

Arizona

Liberty Substation

Buckeye, AZ Co: Maricopa

Location: 3 miles south of Interstate 10 on Tuthill Road

Landholding Agency: Energy

Property Number: 419030001

Status: Underutilized

Comment: 15 acres; buffer area for substation

Iowa

Sioux City Substation

Hinton, IA Co: Plymouth

Location: 1 mile south of Hinton Iowa on Highway 75

Landholding Agency: Energy

Property Number: 419030003

Status: Underutilized

Comment: 34 acres; limitation—easement restrictions; most recent use—transmission line corridor and buffer area

Montana

Miles City Substation

Miles City, MT Co: Custer

Location: 1 mile east of Miles City

Landholding Agency: Energy

Property Number: 419030004

Status: Underutilized

Comment: 59 acres; limitation—easement restrictions; subject to grazing lease; most recent use—buffer area for substation

Custer Substation
Custer, MT Co: Yellowstone
Location: 2 miles east of the town of Custer—east of Highway 47
Landholding Agency: Energy
Property Number: 419030006
Status: Underutilized
Comment: 18 acres; buffer area for substation

North Dakota

Fargo Substation

Fargo, ND Co: Cass

Landholding Agency: Energy

Property Number: 419030005

Status: Underutilized

Comment: 25 acres; most recent use—transmission line corridor and buffer

Nebraska

Grand Island Substation

Phillips, NE Co: Merrick

Location: 5 miles east of Grand Island and 4 miles west of Phillips

Landholding Agency: Energy

Property Number: 419030002

Status: Underutilized

Comment: 11 acres; buffer area for substation; right-of-way for transmission lines for Nebraska Public Power District

Washington

Raver Substation

(See County), WA Co: King

Location: Approximately 16 miles east of Kent

Landholding Agency: Energy

Property Number: 4190300012

Status: Underutilized

Comment: 10+ acres; potential utilities; heavily treed

Wyoming

Wind Site A

Medicine Bow, WY Co: Carbon

Location: 3 miles south and 2 miles west of Medicine Bow

Landholding Agency: Energy

Property Number: 419030010

Status: Excess

Comment: 46.75 acres; limitation—easement restrictions

Suitable Buildings (by State)

Maryland

Bldg. 6599

Ft. George G. Meade

6599 Zimborski Road

Ft. Meade, MD Co: Anne Arundel

Landholding Agency: Army

Property Number: 219030002

Status: Unutilized

Comment: 4173 sq. ft.; 1 story wood frame; possible asbestos; needs major rehab; most recent use—PX exchange facility

Bldg. 3187

Ft. George G. Meade

3187 MacArthur Road

Ft. Meade, MD Co: Anne Arundel

Landholding Agency: Army

Property Number: 219030003

Status: Unutilized

Comment: 1914 sq. ft.; 1 story wood frame; possible asbestos; needs major rehab; most recent use—storage
Bldg. 2815

Ft. George G. Meade
2815 Chish Street

Ft. Meade, MD Co: Anne Arundel
Landholding Agency: Army

Property Number: 219030004

Status: Unutilized

Comment: 2208 sq. ft.; 1 story wood frame; needs rehab; possible asbestos; secured area with alternate access; most recent use—storage

Bldg. 2426

Ft. George G. Meade

2426 Earnie Pyle Street

Ft. Meade, MD Co: Anne Arundel

Landholding Agency: Army

Property Number: 219030005

Status: Unutilized

Comment: 1 story wood frame; needs major rehab; possible asbestos; secured area with alternate access; potential utilities; most recent use—storage

Bldg. 583

Ft. George G. Meade

583 Chamberlain Avenue

Ft. Meade, MD Co: Anne Arundel

Landholding Agency: Army

Property Number: 219030006

Status: Unutilized

Comment: 3245 sq. ft.; one story wood frame; potential utilities; possible asbestos; needs rehab; secured area with alternate access

Montana

Facility #1034 House #21

Hungry Horse Ranger District

Hungry Horse, MT Co: Flathead

Landholding Agency: Agriculture

Property Number: 159030001

Status: Excess

Comment: 768 sq. ft.; 1 story wood frame; most recent use—residential/storage; off-site use only

GSA No. 7-A-MT-560-A

Texas

T-4013

Fort Sam Houston

San Antonio, TX Co: Bexar

Landholding Agency: Army

Property Number: 219030001

Status: Underutilized

Comment: 64067 sq. ft.; 1 story wood frame; needs rehab; limited utilities

Bldg. 11047, Fort Bliss

11047 Randolph Street

Biggs Army Airfield

El Paso, TX Co: El Paso

Landholding Agency: Army

Property Number: 219030168

Status: Unutilized

Comment: 4755 sq. ft.; 1 story wood frame; needs rehab; contains asbestos in boiler room; off-site use only; most recent use—vehicle maintenance shop; scheduled to be vacated 10/1/90

Washington

Thompson Main Residence

Lake Crescent Ranger Station

HC 62, Box 10

Port Angeles, WA

Landholding Agency: Interior

Property Number: 619030001

Status: Unutilized

Comment: 2 story residence; no utilities; needs rehab; off-site use only

Thompson Older Residence

Lake Crescent Ranger Station

HC 62, Box 10

Port Angeles, WA

Landholding Agency: Interior

Property Number: 619030002

Status: Unutilized

Comment: 888 sq. ft.; 1 story residence; no utilities; needs rehab; off-site use only

Thompson Garage

Lake Crescent Ranger Station

HC 62, Box 10

Port Angeles, WA

Landholding Agency: Interior

Property Number: 619030003

Status: Unutilized

Comment: 240 sq. ft.; 1 story garage; no utilities; needs rehab; off-site use only

Thompson Shop

Lake Crescent Ranger Station

HC 62, Box 10

Port Angeles, WA

Landholding Agency: Interior

Property Number: 619030009

Status: Unutilized

Comment: 300 sq. ft.; 1 story shop; no utilities; needs rehab; off-site use only

Thompson Powerhouse

Lake Crescent Ranger Station

HC 62, Box 10

Port Angeles, WA

Landholding Agency: Interior

Property Number: 619030010

Status: Unutilized

Comment: 160 sq. ft.; 1 story powerhouse; no utilities; needs rehab; off-site use only

Thompson Boathouse

Lake Crescent Ranger Station

HC 62, Box 10

Port Angeles, WA

Landholding Agency: Interior

Property Number: 619030011

Status: Unutilized

Comment: 693 sq. ft.; 1 story boathouse; no utilities; needs rehab; off-site use only

Spracklen Utility Shed

Quinalt Ranger Station

Route 2, Box 76

Amanda Park, WA

Landholding Agency: Interior

Property Number: 619030012

Status: Unutilized

Comment: 150 sq. ft.; frame utility shed; limited utilities; off-site use only

Dahinden Storage Building

Quinalt Ranger Station

Route 2, Box 76

Amanda Park, WA

Landholding Agency: Interior

Property Number: 619030013

Status: Unutilized

Comment: 240 sq. ft.; frame storage building; no utilities; needs rehab; off-site use only

Bldg. 1184

Carter Storage Building

Lake Crescent Ranger Station, HC 62, Box 10

Port Angeles, WA

Landholding Agency: Interior

Property Number: 619030016

Status: Unutilized

Comment: 92 sq. ft.; 1 story storage building; no utilities; off-site use only

Universe of Properties:

Total = 194

Suitable = 25

Suitable Buildings = 17

Suitable Land = 8

Unsuitable = 169

Unsuitable Buildings = 163

Unsuitable Land = 6

Number of Resubmissions = 0

[FR Doc. 90-18591 Filed 8-9-90; 8:45 am]

BILLING CODE 4210-29-M

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[NM-010-GPO-0118]

Extension of Public Scoping Period and Announcing of Public Scoping Meeting for the MolyCorp Guadalupe Mountain Tailing Disposal Facility Supplemental Environmental Impact Statement (SEIS)

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of extension of public scoping period and public scoping meeting.

SUMMARY: The Bureau of Land Management, Albuquerque District, announces the extension of the public scoping period and a public scoping meeting for the MolyCorp Guadalupe Mountain Tailings Disposal Facility SEIS.

DATES: Written scoping suggestions will be accepted if they are submitted through September 6, 1990. A public scoping meeting is scheduled for 7 to 10 pm, August 30, 1990, at the Questa Middle School in Questa, New Mexico.

ADDRESSES: Written scoping suggestions should be sent to Robert T. Dale, District Manager, Bureau of Land Management, Albuquerque District Office, 435 Montano NE, Albuquerque, New Mexico 87107. The Questa Middle School where the public meeting will be held is located west of State Highway 522 and approximately one mile north of the junction of State Highways 522 and 38.

FOR FURTHER INFORMATION CONTACT:

Kent Hamilton, Bureau of Land Management, Albuquerque District Office, 435 Montano NE, Albuquerque, New Mexico 87107, telephone COM (505) 761-4546 or FTS 474-4546.

Dated: August 6, 1990.

Robert T. Dale,

District Manager.

[FR Doc. 90-18808 Filed 8-9-90; 8:45 am]

BILLING CODE 4310-FB-M

[AZ-020-00-4212-13; AZA-23360-B]

**Amended Notice of Realty Action;
Exchange of Public Land in Cochise,
Graham, La Paz, Maricopa, Mohave,
Pima, Santa Cruz, Yavapai and Yuma
Counties, AZ**

AGENCY: Bureau of Land Management
(BLM), Interior.

ACTION: Notice of Realty Action,
Exchange.

SUMMARY: On June 5, 1990, Notice of Realty Action AZA-23360-B was published in the *Federal Register*, Vol. 53, No. 103, page 22959, which identified certain land as suitable for exchange under section 206 of the Federal Land Policy and Management Act of 1976, 43 U.S.C. 1716. This Notice of Realty Action amends the original Notice by adding additional public and private land to the exchange. Therefore, the following described land and interest therein has been determined to be suitable for disposal by exchange under section 206 of the Federal Land Policy and Management Act of 1976, 43 U.S.C. 1716:

Gila and Salt River Base and Meridian,
Mohave County, Arizona

T. 19 N., R. 21 W.,

Sec. 20, SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$,
W $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$
SW $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$,
S $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$,
S $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$,
N $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$
NE $\frac{1}{4}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$,
NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$;

Sec. 29, S $\frac{1}{2}$ N $\frac{1}{2}$, S $\frac{1}{2}$;

Sec. 30, S $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$,
N $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$.

Comprising approximately 670 acres.

In exchange for the above-described public land, the United States will acquire all or portions of the private land in the following-described sections from Walter E. Biewer and Edna M. Biewer or their nominee.

Gila and Salt River Base and Meridian,
Arizona

T. 8 N., R. 2 E.,

Secs. 21, 22, 27, 28 and 29.

T. 11 N., R. 2 E.,

Secs. 30 and 31.

T. 10 N., R. 15 W.,

Secs. 1 and 2.

T. 15 N., R. 12 W.,

Sec. 18.

T. 15 N., R. 13 W.,

Sec. 13.

T. 34 N., R. 7 W.,

Secs. 29 and 31.

T. 6 S., R. 11 W.,

Secs. 9, 10 and 11.

T. 11 S., R. 31 E.,

Sec. 31.

T. 12 S., R. 30 E.,

Sec. 1.

T. 12 S., R. 31 E.,

Secs. 2, 5, 6, 8, 9, 11, 12, 13, 22 and 24.

T. 12 S., R. 32 E.,

Secs. 7, 18, 19, 29, 30 and 31.

T. 13 S., R. 30 E.,

Secs. 8, 9, 12, 13 and 15.

T. 13 S., R. 31 E.,

Sec. 18.

T. 18 S., R. 16 E.,

Sec. 24.

T. 18 S., R. 17 E.,

Sec. 9.

T. 19 S., R. 18 E.,

Secs. 9, 10, 15, 21, 22, 23, 27 and 28.

T. 20 S., R. 17 E.,

Secs. 13, 23 and 24.

T. 20 S., R. 18 E.,

Secs. 5, 6, 9 and 10.

T. 23 S., R. 22 E.,

Secs. 15 and 21.

Comprising approximately 10,770 acres,
more or less.

This proposed exchange is consistent with the Bureau's land use planning objectives.

Land being conveyed from the United States will be subject to the following reservations, terms and conditions:

1. A right-of-way for ditches and canals constructed by the authority of the United States, Act of August 30, 1890, 26 Stat. 391, 43 U.S.C. 945.

2. A-23339 and A-23586, road rights-of-way.

3. All valid existing rights.

The land to be acquired by the United States will be subject to the easements, permits and other encumbrances detailed in the subject preliminary title reports prepared by Transamerica Title Insurance Company.

Upon completion of the official appraisal, the acreage of the offered and/or selected land will be adjusted to equalize the values. All lands to be exchanged are included in this Notice.

In accordance with the regulations of 43 CFR 2201.1(b), publication of this Notice will segregate the affected public land from appropriation under the public land laws, except exchange pursuant to section 206 of the Federal Land Policy and Management Act of 1976. The segregative effect shall also exclude appropriation of the subject public land under the mining laws, subject to valid existing rights.

The segregation of the above-described land shall terminate upon issuance of a document conveying title to such land or upon publication in the *Federal Register* of a notice of termination of the segregation or the expiration of two years from the date of the original publication, June 5, 1990, whichever occurs first.

For a period of forty-five (45) days from the date of publication in the *Federal Register*, interested parties may

submit comments to the District Manager, Phoenix District Office, 2015 West Deer Valley Road, Phoenix, Arizona 85027. Comments will be reviewed by the State Director, who may sustain, vacate, or modify this realty action. In the absence of any objections, this realty action will become the final determination of the Department of the Interior.

Dated: August 3, 1990.

Henri R. Bisson,

District Manager.

[FR Doc. 90-18785 Filed 8-9-90; 8:45 am]

BILLING CODE 4310-32-M

[ID-943-00-4212-13; IDI-26365]

**Notice of Issuance of Land Exchange
Conveyance Document; Idaho**

AGENCY: Bureau of Land Management,
Interior.

ACTION: Exchange of Public and Private
Lands.

SUMMARY: The United States has issued an exchange conveyance document to J.R. Simplot Company, of Boise, Idaho 83707, for the following described land under section 206 of the Federal Land Policy and Management Act of 1976:

Boise Meridian

T. 4 S., R. 3 E.,

Sec. 28, lot 4;

Sec. 27, lots 1 and 2.

Comprising 102.50 acres of public land.

In exchange for these lands, the United States acquired the following described lands:

Boise Meridian

T. 5 S., R. 3 E.,

Sec. 12, NE $\frac{1}{4}$ NE $\frac{1}{4}$.

T. 5 S., R. 4 E.,

Sec. 9, E $\frac{1}{2}$ SE $\frac{1}{4}$.

Comprising 120.00 acres of private land.

The purpose of the exchange was to acquire non-federal land which has high public value for raptor nest sites and other wildlife habitat. The public interest was well served through completion of this exchange.

The values of the federal land and the non-federal land in the exchange were appraised at \$5,125 and \$6,000, respectively.

Dated: August 3, 1990.

Duane E. Olsen,

Acting Deputy State Director for Operations.

[FR Doc. 90-18784 Filed 8-9-90; 8:45 am]

BILLING CODE 4310-GG-M

Fish and Wildlife Service**Receipt of Application for Marine Mammal Permit**

The public is invited to comment on the following application for permits to conduct certain activities with marine mammals. The application was submitted to satisfy requirements of the Marine Mammal Protection Act of 1972, as amended (16 U.S.C. 1361 et seq.), the Endangered Species Act of 1973, as amended (16 U.S.C. 1531, et seq.) and the regulations governing marine mammals and endangered species (50 CFR Parts 17 and 18).

File No. PRT 672624

Applicant

Name: R.L. Brownell, National Ecology Research Center, and U.S. Fish and Wildlife Service, and San Simeon, CA.

Type of Permit: Scientific Research.

Name and Number of Animals: sea otter (*Enhydra lutris nereis*) 100 annually for 3 years.

Summary of Activity to be Authorized: This application is for the continuation of capture and tagging activities (ear tag, flipper tag, radio-tag, and implant with passive implantable transponders) in support of research on sea otters in California as previously permitted under PRT 672624. The overall research objective is to continue the long-term life history studies which include research on movements, foraging, activity patterns, characteristics of the reproductive cycle, and characteristics and variations in social behavior and social structure.

Source of marine Mammals for Research: Off the coast of California

Period of Activity: 3 years

Concurrent with the publication of this notice in the *Federal Register*, the Office of Management Authority is forwarding copies of this application to the Marine Mammal Commission and the Committee of Scientific Advisors for their review.

Written data or comments, requests for copies of the complete application, or requests for a public hearing on this application should be submitted to the Director, Office of Management Authority [OMA], 4401 N. Fairfax Drive, Room 432, Arlington, VA 22203, within 30 days of the publication of this notice. Anyone requesting a hearing should give specific reasons why a hearing would be appropriate. The holding of such hearing is at the discretion of the Director.

Documents submitted in connections with the above application are available for review during normal business hours (7:45 am to 4:15 pm) at 4401 N. Fairfax Drive, Room 430, Arlington, VA 22203.

Dated: August 6, 1990.

Karen Willson,

Acting Chief, Branch of Permits, Office of Management Authority.

[FR Doc. 90-18764 Filed 8-9-90; 8:45 am]

BILLING CODE 4310-55-M

National Park Service

Availability of Plan of Operations and Environmental Assessment; Continuing Operation of the Paline Pipeline, Hardin and Jefferson Counties, TX

Notice is hereby given in accordance with § 9.52(b) of title 36 of the Code of Federal Regulations that the National Park Service has received from Lion Oil Company a Plan of Operations for continuing operation of the Paline Pipeline through the Neches Bottom and Lower Neches Units of Big Thicket National Preserve, Hardin and Jefferson Counties, Texas.

The Plan of Operations and Environmental Assessment are available for public review and comment for a period of 30 days from the publication date of this notice in the Office of the Superintendent, Big Thicket National Preserve, 3785 Milam, Beaumont, Texas; and the Southwest Regional Office, National Park Service, 1220 South St. Francis Drive, Room 347, Santa Fe, New Mexico. Copies are available from the Southwest Regional Office, Post Office Box 728, Santa Fe, New Mexico 87504-0728, and will be sent upon request.

Dated: July 26, 1990.

Richard W. Marks,

Regional Director, Southwest Region.

[FR Doc. 90-18766 Filed 8-9-90; 8:45 am]

BILLING CODE 4310-70-M

Proposed 1991 United States World Heritage Nominations

AGENCY: National Park Service, Interior.

ACTION: Public notice and request for comment.

SUMMARY: The Department of the Interior, through the National Park Service, announces the identification of three properties listed herein as two proposed 1991 U.S. nominations to the World Heritage List. These properties were selected from among the potential nominations that were published in the *Federal Register* on March 20, 1990 (55 FR 10327) and in response to public comment to that notice. A draft nomination document will be prepared for each property listed herein, and will serve as the basis for determining later

this calendar year whether to formally nominate the properties for World Heritage status.

DATES: The Federal interagency Panel for World Heritage will meet in August 1990 to review the accuracy and completeness of the draft nomination documents, and to make recommendations to the Assistant Secretary for Fish and Wildlife and Parks, Department of the Interior. Subject to this review and necessary approvals, the Assistant Secretary, or designee, will transmit nomination(s) to the World Heritage Committee Secretariat, through the Department of State, such that it is received no later than October 1, 1990, for evaluation during 1991. If approved, notice of formal U.S. World Heritage nomination(s) will be published in the *Federal Register* in October, 1990.

ADDRESSES: Written comments or recommendations should be sent to the Director, National Park Service, U.S. Department of the Interior, P.O. Box 37127, Washington, DC 20013-7127. Attention: World Heritage Convention-023.

FOR FURTHER INFORMATION CONTACT:

Mr. Robert C. Milne, Chief, Office of International Affairs, National Park Service, U.S. Department of the Interior, P.O. Box 37127, Washington, DC 20013-7127 (202/343-7063).

SUPPLEMENTARY INFORMATION: The Convention Concerning Protection of the World Cultural and Natural Heritage, ratified by the United States and 111 other countries, has established a system of international cooperation through which cultural and natural properties of outstanding universal value to mankind may be recognized and protected. The Convention seeks to put into place an orderly approach for coordinated and consistent heritage resource protection and enhancement throughout the world. The Convention complements each participating nation's heritage conservation programs and provides for:

(a) The establishment of an elected 21-member World Heritage Committee to further the goals of the Convention and to approve properties for inclusion on the World Heritage List;

(b) The development and maintenance of a World Heritage List to be comprised of natural and cultural properties of outstanding universal value;

(c) The preparation of a List of World Heritage in Danger;

(d) The establishment of a World Heritage Fund to assist participating countries in identifying, preserving, and protecting World Heritage properties;

(e) The provision of technical assistance to participating countries, upon request; and

(f) The promotion and enhancement of public knowledge and understanding of the importance of heritage conservation at the international level.

Participating nations identify and nominate their sites for inclusion on the World Heritage List. The World Heritage Committee reviews and evaluates all nominations against established criteria. Under the Convention each participating nation assumes responsibility for taking appropriate legal, scientific, technical, administrative, and financial measures necessary for the identification, protection, conservation, and rehabilitation of World Heritage properties situated within its borders.

In the United States, the Department of the Interior is responsible for directing and coordinating U.S. participation in the World Heritage Convention. The Department implements its responsibilities under the Convention in accordance with the statutory mandate contained in Title IV of the National Historic Preservation Act Amendments of 1980 (P.L. 96-515; 16 U.S.C. 470a-1, a-2). On May 27, 1982, the Interior Department published in the *Federal Register* the policies and procedures which are used to carry out this legislative mandate (47 FR 23391). The rules contain additional information on the Convention and its implementation in the United States, and identify the specific requirements that U.S. properties must satisfy before they can be nominated for World Heritage status (i.e., the property must have previously been determined to be of national significance, its owner must concur in writing to its nomination, and its nomination must include evidence of such legal protections as may be necessary to ensure preservation of the property and its environment).

The Federal Interagency Panel for World Heritage assists the Department in implementing the Convention by making recommendations on U.S. World Heritage policy, procedures, and nominations. The Panel is chaired by the Assistant Secretary for Fish and Wildlife and Parks and includes representatives from the Office of the Assistant Secretary for Fish and Wildlife and Parks, the National Park Service, the U.S. Fish and Wildlife Service, and the Bureau of Land Management within the Department of the Interior; the President's Council on Environmental Quality; the Smithsonian Institution; the Advisory Council on Historic Preservation; National Oceanic and Atmospheric Administration,

Department of Commerce; Forest Service, Department of Agriculture; the U.S. Information Agency; and the Department of State.

Proposed United States World Heritage Nominations

The combined cultural properties, and the natural property, listed below have been identified as two proposed U.S. nominations to the World Heritage List. The identification of these sites as proposed nominations indicates that draft nomination documents will be prepared for each property. These documents will subsequently be evaluated by the Federal Interagency Panel for World Heritage when it convenes in August 1990, at which time a decision on whether to submit formal nomination(s) to the World Heritage List will be made. A brief description of the Site and the World Heritage criteria that it appears to satisfy are provided.

I. Cultural Property

Wisconsin

Architecture: Wright School.

Taliesin, Wisconsin (43°10'N; 90°10'W). The great center of Wright's activity, this combination of home, workshop, laboratory, and retreat consists of several groupings of structures designed individually to suit their different uses. This architectural ensemble, especially valuable to the study of Wright's work, is the summer home and studio of Taliesin Fellowship, the architectural school founded by him. Criteria: (i) represents a unique artistic achievement, a masterpiece of the creative genius; and (ii) has exerted great influence, over a span of time, and within a cultural area of the world, on developments in architecture.

Arizona

Architecture: Wright School.

Taliesin West, Arizona (33°50'N; 111°50'W). This desert complex, the winter quarters of the Taliesin Fellowship, operated as the complement to Taliesin, Wisconsin, during approximately the last 20 years of Wright's life. Together with Taliesin, Wisconsin, this property expresses Wright's educational theories and vision of society, as well as his mature architectural concepts.

Criteria: (i) represents a unique artistic achievement, a masterpiece of the creative genius; and (ii) has exerted great influence over a span of time and within a cultural area of the world, on developments in architecture.

II. Natural Property

Alaska

Pacific Mountain System

Glacier Bay National Park and Preserve, Alaska (58°30'N; 136°30'W). Great tidewater glaciers, a dramatic range of plant communities from rocky terrain recently covered by ice to lush temperature rainforest, and a large variety of animals, including brown and black bear, mountain goats, whales, seals, and eagles, can be found in this site.

Criteria: (ii) an outstanding example of ongoing geological processes and biological evolution, and (iii) contains superlative natural phenomena, formations, and areas of exceptional natural beauty.

Dated: July 30, 1990.

Constance B. Hariman,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 90-18767 Filed 8-9-90; 8:45 am]

BILLING CODE 4310-70-M

INTERSTATE COMMERCE COMMISSION

[Ex Parte No. MC-196]¹

Investigation of Motor Carrier Collective Ratemaking and Related Procedures and Practices; Extension of Time To File Comments

AGENCY: Interstate Commerce Commission.

ACTION: Extension of time to file comments.

SUMMARY: The Commission initiated a consolidated proceeding to conduct a review of the motor carrier ratemaking process, rate bureau activities, and

¹ Embraces No. 40372, *General Increase, Midwest Motor Freight Bureau, January 1, 1990*; No. 40373, *General Increase, Southern Motor Carrier Rate Conference, January 1, 1990*; No. 40374, *General Increase, Rocky Mountain Motor Tariff Bureau, January 1, 1990*; No. 40375, *General Increase, Eastern Central Motor Carrier Association, January 1, 1990*; No. 40376, *General Increase, Central States Motor Freight Bureau, January 1, 1990*; No. 40401, *General Increase, Middle Atlantic Conference, March 5, 1990*; No. 40421, *General Increase, Niagara Frontier Tariff Bureau, April 2, 1990*; and No. 40395, *General Increase, Household Goods Carriers Bureau, February 14, 1990*; No. 40446, *Structured General Increase, Middle West Motor Freight Bureau, June 4, 1990*; No. 40447, *Structured General Increase, Rocky Mountain Motor Tariff Bureau, June 4, 1990*; No. 40448, *Structured General Increase, Southern Motor Carrier Rate Conference, June 4, 1990*; No. 40449, *Structured General Increase, Eastern Central Motor Carrier Association, June 4, 1990*; and No. 40458, *General Increase, PITB, July 1, 1990*. New England Motor Rate Bureau is also named a respondent in this proceeding.

discounting and their relationship to the MC-82 process (as set forth at 49 CFR part 1139), and other related motor carrier issues of importance to both shippers and carriers, 55 FR 28468 (July 11, 1990). Comments from interested parties were to be due on August 10, 1990. The Regular Common Carrier Conference (RCCC) has requested an extension of time, until August 24, 1990, for filing of comments. In view of the complexity and broad scope of the proceeding, RCCC's request is reasonable and will be granted. All comments will now be due by August 24, 1990. No other dates are changed.

DATES: Comments are due by August 24, 1990. An oral hearing will be held on September 5, 1990, for participants to further express their views. Requests to appear and be heard at the hearing shall be submitted to the Commission by August 15, 1990.

ADDRESSES: Send comments and/or requests to appear at the oral hearing (an original and 10 copies) referring to Ex Parte No. MC-196 to: Interstate Commerce Commission, Office of the Secretary, Case Control Branch, Washington, DC 20423.

FOR FURTHER INFORMATION CONTACT: Richard B. Felder, (202) 275-7691. [TDD for hearing impaired: (202) 275-1721.]

Decided: August 3, 1990.

By the Commission, Edward J. Philbin, Chairman.

Sidney L. Strickland, Jr.,

Secretary.

[FR Doc. 90-18811 Filed 8-9-90; 8:45 am]

BILLING CODE 7035-01-M

[Docket No. AB-303 (Sub-No. 5X)]

Wisconsin Central LTD; Abandonment Exemption in Marquette County, MI

Applicant has filed a notice of exemption under 49 CFR 1152 subpart F—*Exempt Abandonments* to abandon its 0.57-mile line of railroad between milepost 155.25, the Ore Dock Approach, to the end of the Ore Dock, in Marquette County, MI.

Applicant has certified that: (1) No local traffic has moved over the line for at least 2 years; (2) any overhead traffic on the line can be rerouted over other lines; and (3) no formal complaint filed by a user of rail service on the line (or a State or local government entity acting on behalf of such user) regarding cessation of service over the line either is pending with the Commission or with any U.S. District Court or has been decided in favor of the complainant within the 2-year period. The appropriate State agency has been

notified in writing at least 10 days prior to the filing of this notice.

As a condition to use of this exemption, any employee affected by the abandonment shall be protected under *Oregon Short Line R. Co.—Abandonment—Goshen*, 360 I.C.C. 91 (1979). To address whether this condition adequately protects affected employees, a petition for partial revocation under 49 U.S.C. 10505(d) must be filed.

Provided no formal expression of intent to file an offer of financial assistance has been received, this exemption will be effective on September 9, 1990 (unless stayed pending reconsideration). Petitions to stay that do not involve environmental issues,¹ formal expressions of intent to file an offer of financial assistance under 49 CFR 1152.27(c)(2),² and trail use/rail banking statements under 49 CFR 1152.29 must be filed by August 20, 1990.³ Petitions for reconsideration and requests for public use conditions under 49 CFR 1152.28 must be filed by August 30, 1990 with:

Office of the Secretary, Case Control Branch, Interstate Commerce Commission, Washington, DC 20423.

A copy of any petition filed with the Commission should be sent to applicant's representative:

Janet H. Gilbert, Wisconsin Central Ltd., 6250 N. River Road, Suite 9000, Rosemont, IL 60018.

If the notice of exemption contains false or misleading information, use of the exemption is void *ab initio*.

Applicant has filed an environmental report which addresses environmental or energy impacts, if any, from this abandonment.

The Section of Energy and Environment (SEE) will prepare an environmental assessment (EA). SEE will issue the EA by August 15, 1990. Interested persons may obtain a copy of the EA from SEE by writing to it (Room 3219, Interstate Commerce Commission, Washington, DC 20423) or by calling Elaine Kaiser, Chief, SEE at (202) 275-

¹ A stay will be routinely issued by the Commission in those proceedings where an informed decision on environmental issues (whether raised by a party or by the Section of Energy and Environment in its independent investigation) cannot be made prior to the effective date of the notice of exemption. See *Exemption of Out-of-Service Rail Lines*, 5 I.C.C.2d 377 (1989). Any entity seeking a stay involving environmental concerns is encouraged to file its request as soon as possible in order to permit this Commission to review and act on the request before the effective date of this exemption.

² See *Exempt. of Rail Abandonment—Offers of Finan. Assist.*, 4 I.C.C.2d 164 (1987).

³ The Commission will accept a late-filed trail use statement so long as it retains jurisdiction to do so.

7684. Comments on environmental and energy concerns must be filed within 15 days after the EA becomes available to the public.

Environmental, public use, or trail use/rail banking conditions will be imposed, where appropriate, in a subsequent decision.

Decided: August 2, 1990.

By the Commission, David M. Konschnick, Director, Office of Proceedings.

Sidney L. Strickland, Jr.,

Secretary.

[FR Doc. 90-18546 Filed 8-9-90; 8:45 am]

BILLING CODE 7035-01-M

DEPARTMENT OF LABOR

Employment Standards Administration, Wage and Hour Division

Minimum Wages for Federal and Federally Assisted Construction; General Wage Determination Decisions

General wage determination decisions of the Secretary of Labor are issued in accordance with applicable law and are based on the information obtained by the Department of Labor from its study of local wage conditions and data made available from other sources. They specify the basic hourly wage rates and fringe benefits which are determined to the prevailing for the described classes of laborers and mechanics employed on construction projects of a similar character and in the localities specified therein.

The determinations in these decisions of prevailing rates and fringe benefits have been made in accordance with 29 CFR part 1, by authority of the Secretary of Labor pursuant to the provisions of the Davis-Bacon Act of March 3, 1931, as amended (46 Stat. 1494, as amended, 40 U.S.C. 276a) and of other Federal statutes referred to in 29 CFR part 1, appendix, as well as such additional statutes as may from time to time be enacted containing provisions for the payment of wages determined to be prevailing by the Secretary of Labor in accordance with the Davis-Bacon Act. The prevailing rates and fringe benefits determined in these decisions shall, in accordance with the provisions of the foregoing statutes, constitute the minimum wages payable on Federal and federally assisted construction projects to laborers and mechanics of the specified classes engaged on contract work of the character and in the localities described therein.

Good cause is hereby found for not utilizing notice and public comment procedure thereon prior to the issuance of these determinations as prescribed in 5 U.S.C. 553 and not providing for delay in the effective date as prescribed in that section, because the necessity to issue current construction industry wage determinations frequently and in large volume causes procedures to be impractical and contrary to the public interest.

General wage determination decisions, and modifications and supersede as decisions thereto, contain no expiration dates and are effective from their date of notice in the **Federal Register**, or on the date written notice is received by the agency, whichever is earlier. These decisions are to be used in accordance with the provisions of 29 CFR parts 1 and 5. Accordingly, the applicable decision, together with any modifications issued, must be made a part of every contract for performance of the described work within the geographic area indicated as required by an applicable Federal prevailing wage law and 29 CFR part 5. The wage rates and fringe benefits, notice of which is published herein, and which are contained in the Government Printing Office (GPO) document entitled "General Wage Determinations Issued Under the Davis-Bacon and Related Acts," shall be the minimum paid by contractors and subcontractors to laborers and mechanics.

Any person, organization, or governmental agency having an interest in the rates determined as prevailing is encouraged to submit wage rate and fringe benefit information for consideration by the Department. Further information and self-explanatory forms for the purpose of submitting this data may be obtained by writing to the U.S. Department of Labor, Employment Standards Administration, Wage and Hour Division, Division of Wage Determinations, 200 Constitution Avenue, NW., room S-3014, Washington, DC 20210.

Modifications to General Wage Determination Decisions

The numbers of the decisions listed in the Government Printing Office document entitled "General Wage Determinations Issued Under the Davis-Bacon and Related Acts" being modified are listed by Volume, State, and page number(s). Dates of publication in the **Federal Register** are in parentheses following the decisions being modified.

Volume I:	
Massachusetts:	
MA90-1 (Jan. 5, 1990)	p. 399
	pp. 404, 411
MA90-3 (Jan. 5, 1990)	p. 431
	p. 434
New York:	
NY90-3 (Jan. 5, 1990)	p. 759
	p. 760
NY90-4 (Jan. 5, 1990)	p. 769
	pp. 771, 774-
	p. 776b
NY90-5 (Jan. 5, 1990)	p. 777
	pp. 778-779
NY90-7 (Jan. 5, 1990)	p. 797
	p. 802
NY90-19 (Jan. 5, 1990)	p. 903
	pp. 904, 907
Pennsylvania:	
PA90-1 (Jan. 5, 1990)	p. 909
	p. 910
PA90-4 (June 5, 1990)	p. 941
	pp. 942, 944
PA90-5 (Jan. 5, 1990)	p. 951
	p. 953
PA90-10 (Jan. 5, 1990)	p. 1005
	p. 1006
PA90-13 (Jan. 5, 1990)	p. 1017
	p. 1018
Virginia:	
VA90-35 (Jan. 5, 1990)	p. 1297
	p. 1298
VA90-56 (Jan. 5, 1990)	p. 1345
	1346
Index 901	p. xxviii-xxx
Volume II:	
Iowa:	
IA90-5 (Jan. 5, 1990)	p. 37
	pp. 38, 40-41
IA90-13 (Jan. 5, 1990)	p. 57,
	p. 58
IA90-14 (Jan. 5, 1990)	p. 58a
	p. 58b
New Mexico:	NM90-1
(Jan. 5, 1990).	p. 747
Ohio:	
OH90-1 (Jan. 5, 1990)	p. 777
	pp. 778-785
OH90-29 (Jan. 5, 1990)	p. 873
	pp. 874-888, 890
	pp. 892-898, 900
	pp. 901, 903-904
	pp. 908-910
Texas:	
TX90-4 (Jan. 5, 1990)	p. 991
	p. 992
TX90-10 (Jan. 5, 1990)	p. 1011
	p. 1012
TX90-18 (Jan. 5, 1990)	p. 1029
	p. 1039
Volume III:	
Utah: UT90-3 (Jan. 5, 1990) ..	p. 359
	pp. 362-363
Washington: WA90-2 (Jan. 5, 1990).	p. 395
	p. 398

General Wage Determination Publication

General wage determinations issued under the Davis-Bacon and related Acts, including those noted above, may be found in the Government Printing Office

(GPO) document entitled "General Wage Determinations Issued Under The Davis-Bacon and Related Acts". This publication is available at each of the 50 Regional Government Depository Libraries and many of the 1,400 Government Depository Libraries across the country. Subscriptions may be purchased from:

Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 783-3238.

When ordering subscription(s), be sure to specify the State(s) of interest, since subscriptions may be ordered for any or all of the three separate volumes, arranged by State. Subscriptions include an annual edition (issued on or about January 1) which includes all current general wage determinations for the States covered by each volume. Throughout the remainder of the year, regular weekly updates will be distributed to subscribers.

Signed at Washington, DC, this 3d day of August 1990.

Alan L. Moss,

Director, Division of Wage Determinations.
[FR Doc. 90-18637 Filed 8-9-90; 8:45 am]

BILLING CODE 4510-27-M

Employment and Training Administration

Labor Surplus Area Classifications Under Executive Orders 12073 and 10582; Addition to the List of Labor Surplus Areas

AGENCY: Employment and Training Administration, Labor.

ACTION: Notice.

DATES: This addition to the list of labor surplus areas is effective August 1, 1990.

SUMMARY: The purpose of this notice is to announce an addition to the list of labor surplus areas.

FOR FURTHER INFORMATION CONTACT: William J. McGarrity, Labor Economist, Employment and Training Administration, 200 Constitution Avenue, NW., Room N-4470, Attention: TEES. Washington, DC 20210. Telephone: 202-535-0189.

SUPPLEMENTARY INFORMATION: Executive Order 12073 requires executive agencies to emphasize procurement set-asides in labor surplus areas. The Secretary of Labor is responsible under that Order for classifying and designating areas as labor surplus areas. Executive agencies should refer to Federal Acquisition Regulation part 20 (48 CFR part 20) in order to assess the impact of the labor

surplus area program on particular procurements.

Under Executive Order 10582 executive agencies may reject bids or offers of foreign materials in favor of the lowest offer by a domestic supplier, provided that the domestic supplier undertakes to produce substantially all of the materials in areas of substantial unemployment as defined by the Secretary of Labor. The preference given to domestic suppliers under Executive Order 10582 has been modified by executive Order 12260. Federal Acquisition Regulation part 25 (48 CFR part 25) implements Executive Order 12260. Executive agencies should refer to Federal Acquisition Regulation part 25 in procurements involving foreign businesses or products in order to assess its impact on the particular procurements.

The Department of Labor regulations implementing Executive Orders 12073 and 10582 are set forth at 20 CFR part 654, subparts A and B. Subpart A requires the Assistant Secretary of Labor to classify jurisdictions as labor surplus areas pursuant to the criteria specified in the regulations and to publish annually a list of labor surplus areas. Pursuant to those regulations the Assistant Secretary of Labor published the annual list of labor surplus areas on October 24, 1989, (54 FR 43353).

Subpart B of part 654 states that an area of substantial unemployment for purposes of Executive Order 10582 is any area classified as a labor surplus area under subpart A. Thus, labor surplus areas under Executive Order 12073 are also areas of substantial unemployment under Executive Order 10582.

The area described below has been classified by the Assistant Secretary of Labor as a labor surplus area pursuant to 20 CFR 654.5(b) (48 FR 15615 April 12, 1983) and is effective August 1, 1990.

The list of labor surplus areas is published for the use of all Federal agencies in directing procurement activities and locating new plants or facilities.

Signed at Washington, DC on July 31, 1990.
Roberts T. Jones,
Assistant Secretary of Labor.

Addition to the Annual List of Labor Surplus Areas.

August 1, 1990.

Labor surplus area	Civil jurisdiction included
Alabama: Coffee County	Coffee County.

[FR Doc. 90-18840 Filed 8-9-90; 8:45 am]
 BILLING CODE 4510-30-M

Mine Safety and Health Administration

[Docket No. M-90-102-C]

Shamrock Coal Co., Inc.; Petition for Modification of Application of Mandatory Safety Standard

Shamrock Coal Company, Inc., P.O. Box 130, Manchester, Kentucky 40962-0130 has filed a petition to modify the application of 30 CFR 75.326 (aircourses and belt haulage entries) to its Beech Fork No. 18-19 Mine (I.D. No. 15-02502) located in Leslie County, Kentucky. The petition is filed under section 101(c) of the Federal Mine Safety and Health Act of 1977.

A summary of the petitioner's statements follows:

1. The petition concerns the requirement that intake and return aircourses be separated from belt haulage entries and that belt haulage entries not be used to ventilate active working places.

2. As an alternate method, the petitioner proposes to use air in the belt entry to ventilate active working places.

3. In support of this request petitioner states that—

(a) An early warning fire detection system would be installed using a low-level carbon monoxide (CO) detection system in all belt entries used as intake aircourses. The low-level CO system would be capable of giving warning of a fire for four hours should the power fail; a visual alert signal would be activated when the CO level is 10 parts per million (ppm) above ambient air and an audible signal would sound at 15 ppm above ambient air. All persons would be withdrawn to a safe area at 10 ppm and evacuated at 15 ppm. The CO monitoring system would initiate the fire alarm signal at an attended surface location where there would be two-way communication. This responsible person would notify the working sections and other personnel who may be endangered, when the established alert and alarm levels are reached. The CO system would be capable of identifying any activated sensor and for monitoring electrical continuity and detecting electrical malfunctions;

(b) The CO monitoring system would be visually examined at least once each shift and tested weekly to ensure the monitoring system is functioning properly and that required maintenance is being performed. The monitoring system would be calibrated with known concentrations of CO and air mixtures at least monthly; and

(c) If at any time the CO monitoring system or any portion of the system has been deenergized for reasons such as routing maintenance or failure of a sensor unit, the belt conveyor may continue to operate provided the affected portion of the belt conveyor entry would be continuously patrolled and monitored for CO by a qualified person using a handheld CO detecting device.

4. Petitioner states that the proposed alternate method will provide the same degree of safety for the miners affected as that provided by the standard.

Request for Comments

Persons interested in this petition may furnish written comments. These comments must be filed with the Office of Standards, Regulations and Variances, Mine Safety and Health Administration, Room 627, 4015 Wilson Boulevard, Arlington, Virginia 22203. All comments must be postmarked or received in that office on or before September 10, 1990. Copies of petition are available for inspection at that address.

Dated: August 3, 1990.

Patricia W. Silvey,

Director, Office of Standards, Regulations and Variances.

[FR Doc. 90-18839 Filed 8-9-90; 8:45 am]

BILLING CODE 4510-43-M

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice 90-65]

Establishment of the Advisory Committee on the Future of the U.S. Space Program

AGENCY: National Aeronautics and Space Administration.

ACTION: Notice of establishment.

SUMMARY: Pursuant to sections 9 (a) and (c) of the Federal Advisory Committee Act, Public Law 92-463, and after consultation with the Committee Management Secretariat, General Services Administration, the National Aeronautics and Space Administration (NASA) has determined that establishment of the Advisory Committee on the Future of the U.S. Space Program (hereafter referred to as the "Advisory Committee") is in the public interest in connection with the performance of duties imposed upon NASA by law.

FOR FURTHER INFORMATION CONTACT: Mr. James D. Bain, Code ADA-1, National Aeronautics and Space

Administration, Washington, DC 20546, 202/453-2409.

SUPPLEMENTARY INFORMATION: The Vice President, in his capacity as head of the National Space Council, has determined that it is appropriate for the National Aeronautics and Space Administration to establish the Advisory Committee to look into the future of the U.S. space program. The Advisory Committee will advise the NASA Administrator on overall approaches NASA management can use to implement the U.S. space program for the coming decades. The Advisory Committee is chaired by Mr. Norman R. Augustine and is composed of 12 members, selected from a cross section of qualified individuals with an extensive knowledge of space activities and broad technical and managerial expertise.

Dated: August 7, 1990.

John W. Gaff,

*Advisory Committee Management Officer,
National Aeronautics and Space
Administration.*

FR Doc. 90-18942 Filed 8-9-90; 8:45 am]

BILLING CODE 7510-01-M

NATIONAL ARCHIVES AND RECORDS ADMINISTRATION

Records Schedules; Availability and Request for Comments

AGENCY: National Archives and Records Administration, Office of Records Administration.

ACTION: Notice of availability of proposed records schedules; request for comments.

SUMMARY: The National Archives and Records Administration (NARA) publishes notice at least once monthly of certain Federal agency requests for records disposition authority (records schedules). Records schedules identify records of sufficient value to warrant preservation in the National Archives of the United States. Schedules also authorize agencies after a specified period to dispose of records lacking administrative, legal, research, or other value. Notice is published for records schedules that (1) propose the destruction of records not previously authorized for disposal, or (2) reduce the retention period for records already authorized for disposal. NARA invites public comments on such schedules, as required by 44 USC 3303a(a).

DATES: Requests for copies must be received in writing on or before September 24, 1990. Once the appraisal of the records is completed, NARA will

send a copy of the schedule. The requester will be given 30 days to submit comments.

ADDRESSES: Address requests for single copies of schedules identified in this notice to the Records Appraisal and Disposition Division (NIR), National Archives and Records Administration, Washington, DC 20408. Requesters must cite the control number assigned to each schedule when requesting a copy. The control number appears in parentheses immediately after the name of the requesting agency.

SUPPLEMENTARY INFORMATION: Each year U.S. Government agencies create billions of records on paper, film, magnetic tape, and other media. In order to control this accumulation, agency records managers prepare records schedules specifying when the agency no longer needs the records and what happens to the records after this period. Some schedules are comprehensive and cover all the records of an agency or one of its major subdivisions. These comprehensive schedules provide for the eventual transfer to the National Archives of historically valuable records and authorize the disposal of all other records. Most schedules, however, cover records of only one office or program or a few series of records, and many are updates of previously approved schedules. Such schedules also may include records that are designated for permanent retention.

Destruction of records requires the approval of the Archivist of the United States. This approval is granted after a thorough study of the records that takes into account their administrative use by the agency of origin, the rights and interests of the Government and of private persons directly affected by the Government's activities, and historical or other value.

This public notice identifies the Federal agencies and their subdivisions requesting disposition authority, includes the control number assigned to each schedule, and briefly describes the records proposed for disposal. The records schedule contains additional information about the records and their disposition. Further information about the disposition process will be furnished to each requester.

Schedules Pending:

1. Department of the Army (N1-77-89-1). Routine administrative correspondence.
2. Defense Intelligence Agency (N1-373-90-2). Routine records accumulated by the Office of Naval Intelligence (redundant and/or unidentified

photographs of I.G. Farben facilities and personnel and drawings and blueprints of insignificant facilities and equipment).

3. Department of Commerce, Office of the General Counsel, Chief Counsel for Technology (N1-40-90-2). Index to Patented Invention Case Files and Inactivated Invention case files.

4. Department of Commerce, National Oceanic and Atmospheric Administration (N1-370-90-5). Public weather program management files, including Automation of Field Services (AFOS) records.

5. Department of Commerce, Bureau of Economic Analysis (N1-375-90-1). Annual business forecasts and econometric models, capacity utilization records, and National Income Division files.

6. Department of Energy, Bonneville Power Administration (N1-305-90-1). Research and development files and other administrative records that do not contain significant policy information.

7. Federal Communications Commission, Office of the Executive Director, Dockets Branch (N1-173-90-4). Reduction in retention period for work papers and other documentation of docketed and non-docketed rule-making proceedings.

8. General Accounting Office (N1-411-90-4). Routine and facilitative records relating to GAO Committees and Task Forces (Substantive Task Force files will be retained).

9. Department of Health and Human Services, Health Resources and Services Administration (N1-90-90-10). Maternal and Child Health Grants to States.

10. United States Information Agency, Broadcast Operations, Traffic Management Branch (N1-306-90-2). Master Program Books containing facilitative information concerning Voice of America broadcasts.

11. Department of Justice, Civil Division (N1-60-90-8). Duplicative indices and docket cards covering Japanese-American renunciant and evacuation claims case files.

12. Department of Justice, Civil Division (N1-60-90-9). Reference files of the Deputy Assistant Attorneys General.

13. Department of Justice, Civil Rights Division (N1-60-90-10). Reference files of Special Assistants.

14. Department of Labor, Employment Standards Administration (N1-271-90-1). Miscellaneous records of the Office of Worker's Compensation Programs and predecessor programs, 1933-1971.

15. National Aeronautics and Space Administration, Ames Research Center

(N1-255-90-2). Raw test and evaluation data runs, 1940-60.

16. National Aeronautics and Space Administration, White Sands Test Facility (N1-255-90-4). Research and development project files.

17. Department of State, Deputy Under Secretary for Administration (N1-59-90-4). Routine, facilitative, reference, and duplicative material relating to performance evaluation.

18. Department of State, Bureau of Educational and Cultural Affairs (N1-59-90-20). Routine, facilitative, and grantee files.

19. Department of Transportation, Federal Highway Administration (N1-406-89-1). Unarranged and unidentified copies of aerial survey maps and photographic records depicting generic road grading and paving activities.

20. Department of the Treasury, Office of Tax Policy (N1-56-90-5). Closed regulation files.

21. Department of the Treasury, Employment Policy Officer (N1-56-90-7). Routine records removed from employment policy files.

22. Department of the Treasury, Office of the General Counsel (N1-56-90-8). Compromise case files, 1935-1960.

23. Department of the Treasury, Bureau of Alcohol, Tobacco, and Firearms, Compliance Operations (N1-436-90-1). Revisions to comprehensive records schedule.

Dated: August 6, 1990.

Claudine J. Weiher,

Acting Archivist of the United States.

[FR Doc. 90-18783 Filed 8-9-90; 8:45 am]

BILLING CODE 7515-01-M

NATIONAL SCIENCE FOUNDATION

Committee Management; Establishment

The Assistant Directors of the committees listed below have determined that the establishments are necessary and in the public interest in connection with the performance of duties imposed upon the Director, National Science Foundation (NSF) by 42 USC 1861 *et seq.*

Names of Committees

Special Emphasis Panel in Mechanical and Structural Systems

Special Emphasis Panel in Chemistry

Special Emphasis Panel in Design and Manufacturing Systems

Special Emphasis Panel in Physics

Purpose: To advise on the merit of special emphasis proposals or applications submitted to NSF for financial support.

Balanced Membership Plan:

Membership will be selected on an "as needed" basis in response to specific proposals, applications, sites to be reviewed. Members will be selected for their demonstrated scientific and engineering expertise so as to represent a reasonable balance of capability in the various subfields of the proposals to be reviewed. Consideration will also be given to achieving geographic balance and the enhancing representation for women, minority, younger and disabled scientists.

Dated: August 8, 1990.

M. Rebecca Winkler,

Committee Management Officer.

[FR Doc. 90-18987 Filed 8-9-90; 8:45 am]

BILLING CODE 7555-01-M

Meetings; Design and Manufacturing Systems Special Emphasis

AGENCY: National Science Foundation.

ACTION: Notice of meetings.

SUMMARY: In accordance with the Federal Advisory Committee Act (Public Law 92-463, as amended), the National Science Foundation announces the following meeting(s) to be held at 1800 G. Street, NW., Washington, DC 20550 (except where otherwise indicated).

SUPPLEMENTARY INFORMATION: The purpose of the meetings is to provide advice and recommendations to the National Science Foundation concerning the support of research, engineering, and science education. The agenda is to review and evaluate proposals as part of the selection process for awards. The entire meeting is closed to the public because the panels are reviewing proposals that include information of a proprietary or confidential nature, including technical information; financial data, such as salaries; and personal information concerning individuals associated with the proposals. These matters are within exemptions (4) and (6) of 5 U.S.C. 552b (c), the Government in the Sunshine Act.

CONTACT PERSON: Rebecca Winkler, Committee Management Officer, room 208, 357-7363.

REASON FOR LATE NOTICE: This notice is late because of the necessity for these panels to meet before the end of August.

Dated: August 8, 1990.

M. Rebecca Winkler,

Committee Management Officer.

Committee name	Agenda	Date(s)	Time	Room ¹
Special Emphasis Panel for Design and Manufacturing Systems	SBIR	08/16/90	8:30 a.m. to 5 p.m.	1133
Special Emphasis Panel for Mechanical and Structural Systems	SBIR	08/28/90	8:30 a.m. to 5 p.m.	1250
Special Emphasis Panel for Chemistry	SBIR	08/24/90	8:30 a.m. to 5 p.m.	1250
		08/25/90		

¹ At 1800 G Street, NW., Washington, DC.

Committee name	Agenda	Date(s)	Time	Location
Special Emphasis Panel for Physics	Site visit	08/28/90 08/29/90	8:30 a.m. to 5 p.m. 8:30 a.m. to 5 p.m.	Newman Laboratory, Cornell University, Ithaca, NY.

[FR Doc. 90-18986 Filed 8-9-90; 8:45 am]

BILLING CODE 7555-01-M

NUCLEAR REGULATORY COMMISSION

[Docket No. 50-416]

Entergy Operations, et al.; Environmental Assessment and Finding of No Significant Impact

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating License No. NPF-29 issued to the licensee, for operation of the Grand Gulf Nuclear Station (GGNS), Unit 1, located in Claiborne County, Mississippi.

Environmental Assessment

Identification of Proposed Action

The proposed amendment would change the Technical Specifications (TS) in accordance with the guidance provided in Generic Letter 87-09, "sections 3.0 and 4.0 of the Standard Technical Specifications (STS) on the Applicability of Limiting Conditions for Operation and Surveillance Requirements." The general requirements in TS 3.0.4, applicable to each limiting condition for operation (LCO) within section 3.0, would be changed to allow operational condition changes without meeting the LCO requirements provided the remedial actions in the associated action statements do not require reactor shutdown if the LCO is not met in a specified time. For those TS which presently have an exception to TS 3.0.4, the exception would be deleted because the change in TS 3.0.4 would achieve the same effect by itself. For applicable TS which do not presently have an exception to TS 3.0.4, the change in TS 3.0.4 provides increased operational flexibility. TS 4.0.3 would be changed to allow up to 24 hours additional time to run missed surveillance tests. TS 4.0.4 would be changed to clarify that it does not prevent changing operational conditions to comply with action requirements. The Bases for TS 3.0 and 4.0 would be changed to reflect the changes in the TS.

The proposed action is in accordance with the licensee's application for amendment dated August 19, 1988, as revised November 9, 1988, December 14, 1988, March 28, 1989, July 27, 1989, April 6, 1990, and May 23, 1990.

The Need for the Proposed Action

The proposed change is needed to permit operational flexibility by eliminating unnecessary restrictions to changing from one Operational Condition to another and providing additional time to run surveillances

when the specified surveillance interval is inadvertently exceeded. In addition, the clarification of TS 4.0.4 is needed to assure that completion of action requirements will take precedence over surveillance requirements when there is an apparent conflict.

Environmental Impacts of the Proposed Action

The Commission has completed its evaluation of the proposed change to TS and has concluded that the proposed TS would provide a level of safety consistent with the updated Final Safety Analysis Report. Therefore, the proposed amendment does not significantly increase the probability or consequences of any accident. The Commission also concluded that the amendment involves no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite and that there should be no significant increase in individual or cumulative occupational radiation exposure. Accordingly, the Commission concludes that this proposed action would result in no significant radiological environmental impact.

With regard to potential non-radiological impacts, the proposed change to the TS involves requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR part 20. It does not affect non-radiological plant effluents and has no other environmental impact. Therefore, the Commission concludes that there are no significant non-radiological environmental impacts associated with the proposed amendment.

Alternative to the Proposed Action

Since the Commission concludes that there are no significant environmental effects that would result from the proposed action, any alternatives with equal or greater environmental impacts need not be evaluated.

The principal alternative would be to deny the requested amendment. This would not reduce environmental impacts of plant operation and would result in reduced operational flexibility.

Alternative Use of Resources

This action does not involve the use of any resources not previously considered in the Final Environmental Statements related to the operation of Grand Gulf Nuclear Station, Units 1 and 2, dated September 1981.

Agencies and Persons Consulted

The NRC staff reviewed the licensee's request and did not consult other agencies or persons.

Finding of No Significant Impact

The Commission has determined not to prepare an environmental impact statement for the proposed license amendment.

Based upon the foregoing environmental assessment, we conclude that the proposed action will not have a significant effect on the quality of the human environment.

For further details with respect to this action, see the application for amendment dated August 19, 1988, as supplemented November 9, 1988, December 14, 1988, March 28, 1989, July 27, 1989, April 6, 1990 and May 23, 1990, which are available for public inspection at the Commission's Public Document Room, 2120 L Street, NW., Washington, DC and at the Hinds Junior College, McLendon Library, Raymond, Mississippi 39154.

Dated at Rockville, Maryland, this 3rd day of August 1990.

For the Nuclear Regulatory Commission.

Theodore R. Quay,

Acting Director, Project Directorate IV-1,
Division of Reactor Projects—III, IV, V and
Special Projects, Office of Nuclear Reactor
Regulation.

[FR Doc. 90-18817 Filed 8-9-90; 8:45 am]

BILLING CODE 7590-01-M

Public Workshop on the Individual Plant Examination of External Events (IPEEE) for Severe Accident Vulnerabilities

AGENCY: Nuclear Regulatory
Commission.

ACTION: Preliminary agenda of IPEEE
workshop.

SUMMARY: On November 23, 1988 the NRC issued Generic Letter 88-20, Individual Plant Examination for Severe Accident Vulnerabilities. The generic letter requested all licensees holding operating licenses for nuclear power reactor facilities to perform an individual plant examination for severe accident vulnerabilities due to internal events, including internal flooding. The request for an individual plant examination of external events (IPEEE) for severe accident vulnerabilities was postponed to permit the staff to (1) identify the external hazards that need a systematic examination (2) identify examination methods and develop guidance and procedures, and (3) coordinate the IPEEE with other ongoing NRC programs that deal with various aspects of external event evaluations to ensure that there is no duplication of staff and industry efforts. The staff has

completed this work and plans to request in a supplement to Generic Letter 88-20 that each licensee perform an IPEEE to identify plant-specific vulnerabilities, if any, to severe accidents and report the results to the NRC. As previously announced in a Federal Register Notice dated July 25, 1990, a draft of this supplement and a supporting NUREG document have been prepared and are available for review and comment. A copy has been placed in the NRC Public Document Room, Gelman Building, 2120 L Street NW., Washington, DC. A free single copy may be obtained by writing to the U.S. Nuclear Regulatory Commission, Attn: Distribution Section, 7103-MNBB, Washington, DC 20555. The NRC plans to conduct a workshop, which was also previously announced, to discuss the IPEEE objectives and solicit questions and points for clarification on the draft Supplement and on the draft guidance document, NUREG-1407, "Procedural and Submittal Guidance for Individual Plant Examination of External Events (IPEEE) for Severe Accident Vulnerabilities". A preliminary agenda of the workshop is provided below.

DATES: 11-13, 1990.

PLACE: The Pittsburgh Hilton, 600 Commonwealth Place, Gateway Center, Pittsburgh, PA 15222. Telephone (412) 391-4600.

FOR FURTHER INFORMATION CONTACT:

John T. Chen, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Telephone (301) 492-3919.

SUPPLEMENTARY INFORMATION: The following is the preliminary agenda for the workshop.

- September 11, 1990, 9 a.m.-5 p.m.
 1. Introduction, Regulatory Perspectives, & Opening Remarks.
 2. Update of IPE, CPI & Accident Management Programs.
 3. Objectives and Schedule of IPEEE.
 4. Overview of Supplement 4 to Generic Letter 88-20.
 5. Overview of the IPEEE Procedural & Submittal Guidance Document (NUREG-1407).
 6. Methodology for Internal Fires.
 7. Methodologies for High Winds, Floods, & Others.
 8. Question/Answer Period.
- September 12, 1990, 9 a.m.-5 p.m.
 1. Session Chairman's Introduction.
 2. Seismic PRA Method.
 3. Seismic Margins Method.
 4. Coordination of External Events.
 5. Resolution of Charleston Earthquake Issue.

6. Submittal Guidance.
 7. Reiteration and Clarification of Earlier Comments/Questions.
 8. Question/Answer Period.
- September 13, 1990, 8 a.m.-11:30 a.m.
1. Prepared Comments by the Public on Supplement 4 to Generic Letter 88-20 and NUREG-1407).
 2. Question/Answer Period.
 3. General and Closing Comments.
 4. Adjourn.

Dated in Rockville, Maryland this 3rd day of August, 1990.

For the Nuclear Regulatory Commission,
 Willima D. Beckner,
Chief, Severe Accident Issues Branch, Office of Nuclear Regulatory Research.
 [FR Doc. 90-18821 Filed 8-9-90; 8:45 am]
 BILLING CODE 7590-01-M

Advisory Committee on Nuclear Waste; Meeting

The Advisory Committee on Nuclear Waste (ACNW) will hold its 23rd meeting on August 29, 30, and 31, 1990, Room P-110, 7920 Norfolk Avenue, Bethesda, MD, 8:30 a.m. until 5 p.m. each day. The entire meeting will be open to the public.

The purpose of the meeting will be to review and discuss the following topics:

A. The Committee will review a branch technical position which deals with the cementation of low-level radioactive waste (waste form).

B. The Committee will hear a briefing on the NRC staff's overall approach to providing guidance on seismic hazards and tectonics at the proposed high-level waste repository.

C. The Committee will prepare remarks for its participation in a symposium on radioactive waste repository licensing sponsored by the U.S. National Academy of Sciences, National Research Council, Board on Radioactive Waste Management, September 17-18, 1990, Washington, DC.

D. The Committee will hear a briefing in a position statement, "Rethinking High-Level Radioactive Waste Disposal," from the Board on Radioactive Waste Management, National Research Council, and other interested parties. Of special concern are those recommendations in the report addressed to the NRC.

E. The Committee will continue discussions with the EPA on their standards for high-level radioactive waste disposal in a geologic repository. (tentative)

F. The Committee will review the effect of the National Emission Standards for Hazardous Air Pollutants

(NESHAP) on radioactive waste management and disposal. (tentative)

G. The Committee will review aspects of decommissioning other than 10 CFR part 50 facilities and determine its potential involvement in such reviews.

H. The Committee will be briefed on the current review procedures being developed (revised) by the NRC staff for their reviews of DOE Study Plans associated with Site Characterization for the proposed high-level waste repository.

I. The Committee will discuss anticipated and proposed Committee activities, future meeting agenda, and organization matters, as appropriate.

Procedures for the conduct of and participation in CNW meetings were published in the *Federal Register* on June 6, 1988 (53 FR 20699). In accordance with these procedures, oral or written statements may be presented by members of the public; recordings will be permitted only during those portions of the meeting when a transcript is being kept, and questions may be asked only by members of the Committee, its consultants, and staff. The office of the ACRS is providing staff support for the ACNW. Persons desiring to make oral statements should notify the Executive Director of the office of the ACRS as far in advance as practical so that appropriate arrangements can be made to allow the necessary time during the meeting for such statements. Use of still, motion picture, and television cameras during this meeting may be limited to selected portions of the meeting as determined by the ACNW Chairman. Information regarding the time to be set aside for this purpose may be obtained by a prepaid telephone call to the Executive Director of the office of the ACRS; Mr. Raymond F. Fraley (telephone 301/492-4516), prior to the meeting. In view of the possibility that the schedule for ACNW meetings may be adjusted by the Chairman as necessary to facilitate the conduct of the meeting, persons planning to attend should check with the ACRS Executive Director or call the recording (301/492-4600) for the current schedule if such rescheduling would result in major inconvenience.

Dated: August 6, 1990.

John C. Hoyle,
Advisory Committee Management Officer.
 [FR Doc. 90-18815 Filed 8-9-90; 8:45 am]

BILLING CODE 7590-01-M

Regulatory Guides; Issuance and Availability

The Nuclear Regulatory Commission has issued two related guides in its Regulatory Guide Series. This series has been developed to describe and make available to the public such information as methods acceptable to the NRC staff for implementing specific parts of the Commission's regulations, techniques used by the staff in evaluating specific problems or postulated accidents, and data needed by the staff in its review of applications for permits and licenses.

Revision 3 to Regulatory Guide 1.35, "Inservice Inspection of UngROUTed Tendons in Prestressed Concrete Containments," provides guidance acceptable to the NRC staff for developing an appropriate inservice inspection and surveillance program for ungrouted tendons in prestressed concrete containment structures of light-water-cooled reactors. Regulatory Guide 1.35.1, "Determining Prestressing Forces for Inspection of Prestressed Concrete Containments," provides guidance on determining prestressing forces to be used for the inservice inspections.

Comments and suggestions in connection with (1) items for inclusion in guides currently being developed or (2) improvements in all published guides are encouraged at any time. Written comments may be submitted to the Regulatory Publications Branch, Division of Freedom of Information and Publications Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

Regulatory guides are available for inspection at the Commission's Public Document Room, 2120 L Street, NW., Washington, DC. Copies of issued guides may be purchased from the Government Printing Office at the current GPO price. Information on current GPO prices may be obtained by contacting the Superintendent of Documents, U.S. Government Printing Office, Post Office Box 37082, Washington, DC 20013-7082, telephone (202) 275-2060 or (202) 275-2171. Issued guides may also be purchased from the National Technical Information Service on a standing order basis. Details on this service may be obtained by writing NTIS, 5285 Port Royal Road, Springfield, VA 22161.

Authority: 5 U.S.C. 552(a).

Dated at Rockville, Maryland, this 27th day of July 1990.

For the Nuclear Regulatory Commission.
Eric S. Beckjord,
Director, Office of Nuclear Regulatory Research.

[FR Doc. 90-18739 Filed 8-9-90; 8:45 am]

BILLING CODE 7590-01-M

Containment Period for High-Level Waste Packages

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of availability.

SUMMARY: The Nuclear Regulatory Commission (NRC) is announcing the availability of a Staff Position SP 60-001, "Clarification of the 300-1000 Years Period for Substantially Complete Containment of High-Level Wastes Within the Waste Packages under 10 CFR 60.113 (a)(1)(ii)(A)."

ADDRESSES: Copies of SP 60-001 are available for public inspection and/or copying at the NRC Public Document Room, 2120 L Street (lower level), NW., Washington, DC 20555, and the Local Public Document Rooms located at the James R. Dickinson Library, Special Collections Department, University of Nevada-Las Vegas, 4505 Maryland Parkway, Las Vegas, Nevada 89154 and University Library, University of Nevada-Reno, Reno, Nevada 89557. Copies are also available from the National Technical Information Service, 5285 Port Royal, Springfield, Virginia 22161.

FOR FURTHER INFORMATION CONTACT: Dr. Richard Weller, Engineering Branch, Division of High-Level Waste Management, U.S. Nuclear Regulatory Commission, 11555 Rockville Pike, Rockville, Maryland 20852. Telephone 301/492-3458.

SUPPLEMENTARY INFORMATION: This Staff Position clarifies the meaning of the 300-1000 years period for substantially complete containment of high-level wastes within the waste package under 10 CFR 60.113 (a)(1)(ii)(A). Based on its evaluation, the Staff Position is that the requirement for substantially complete containment for a period of 300-1000 years following repository closure is a minimum performance requirement which is not to be viewed as a cap on the waste package lifetime or a limitation on the credit that can be taken in engineered barrier system or overall repository system performance assessments if the waste package is designed to provide containment in excess of 1000 years.

Staff Positions are prepared for the guidance of the Office of Nuclear Material Safety and Safeguards staff

responsible for the review of a license application proposing the construction and operation of a geologic repository for high-level radioactive waste. These documents are made available to the public as part of the Commission's policy to inform the U.S. Department of Energy, affected parties, and the general public, including the nuclear industry, of regulatory procedures and policies. Staff Positions are not intended as substitutes for the Commission's regulations and are not binding upon the other parties to any licensing proceeding.

Published Staff Positions will be revised, as appropriate, to accommodate comments and to reflect new information and experience. Comments and suggestions for improvement are invited and should be sent to the U.S. Nuclear Regulatory Commission, Office of Nuclear Material Safety and Safeguards, Division of High-Level Waste Management, Repository Licensing and Quality Assurance Project Directorate, Rockville, Maryland 20852.

Dated at Rockville, Maryland this 27th day of July, 1990.

For the Nuclear Regulatory Commission.

Robert M. Bernero,

Director, Office of Nuclear Material Safety and Safeguards.

[FR Doc. 90-18818 Filed 8-9-90; 8:45 am]

BILLING CODE 7590-01-M

[Docket No. 50-325]

Carolina Power & Light Com.; Withdrawal of Application For Amendment to Facility Operating License Brunswick Steam Electric Plant, Unit 1

The United States Nuclear Regulatory Commission (the Commission) has granted the June 13, 1990, request of Carolina Power & Light Company (the licensee) to withdraw their application for amendment dated April 19, 1990, for the Brunswick Steam Electric Plant, Unit 1 (Brunswick) located in Brunswick County, North Carolina. The proposed amendment would have revised the surveillance interval associated with Technical Specification 4.8.1.1.2.d.1 to allow a one-time only extension of these surveillances until October 31, 1990.

The Commission issued a Notice of Consideration of Issuance of Amendment in the *Federal Register* on May 2, 1990 (55 FR 18409). By letter dated June 13, 1990, the licensee withdrew their application for the proposed amendment. The basis for withdrawal of the application is that the licensee completed the surveillance requirement, as required by Technical

Specification 4.8.1.1.2.d.1, during the shutdown in the May/June time frame.

For further details with respect to this action see the application dated April 19, 1990, and the licensee's letter of withdrawal dated June 13, 1990. The above are available for public inspection at the Commission's Public Document room, 2120 L Street, NW, Washington, DC and at the University of North Carolina at Wilmington, William Madison Randall Library, 601 S. College Road, Wilmington, North Carolina.

Dated at Rockville, Maryland this 2nd day of August 1990.

For the Nuclear Regulatory Commission.
Ngoc Le,

*Project Manager, Project Directorate II-1,
Division of Reactor Projects—I/II, Office of
Nuclear Reactor Regulation.*

[FR Doc. 90-18319 Filed 8-9-90; 8:45 am]

BILLING CODE 7590-1-M

[Docket No. 50-213]

Connecticut Yankee Atomic Power Co.; Consideration of Issuance of Amendment to Facility Operating License and Proposed No Significant Hazards Consideration Determination and Opportunity for Hearing

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating License No. DPR-61, issued to Connecticut Yankee Atomic Power Company (the licensee), for operation of the Haddam Neck Plant located in Middlesex County, Connecticut.

The amendment would add an exception from the requirements of Technical Specification 4.0.4 to Surveillance Requirements 4.7.1.2.2.a, b and c for entry into Mode 3.

With the current Technical Specifications the plant cannot progress from Mode 4 to Mode 3 until it has demonstrated auxiliary feedwater system operability (surveillance requirement 4.7.1.2.2). In order to demonstrate auxiliary feedwater system operability the plant must be in Mode 3 (or higher) when secondary steam temperature and pressure are sufficient to operate the auxiliary feedwater pumps. The Commission has determined that exigent circumstances exist as the Technical Specifications prevents the resumption of power plant operation. The NRC staff issued a Temporary Waiver of Compliance regarding TS 4.7.1.2.2 on July 27, 1990.

Before issuance of the proposed license amendment, the Commission will have made findings required by the Atomic Energy Act of 1954, as amended

(the Act) and the Commission's regulations.

The Commission has made a proposed determination that the amendment request involves no significant hazards consideration. Under the Commission's regulations in 10 CFR 50.92, this means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

The licensee has reviewed the proposed request and has provided the following no significant hazards consideration determination:

The proposed change would not involve a significant hazards consideration because the change would not:

1. Involve a significant increase in the probability of occurrence or consequences of an accident previously analyzed.

Since assurance of operability of auxiliary feedwater in Modes 1 and 2 is not affected, design basis accidents which are postulated to occur during power operation will not be affected. Only those accidents initiated from subcritical (i.e., Mode 3) conditions such as steam line break or uncontrolled rod withdrawal could be affected.

Also, the effect of this change on decay heat removal with main feedwater unavailable (e.g., due to a loss of normal power (LNP), etc) has been evaluated.

For accidents which can have significant consequences during Mode 3 operation, such as steam line break, operation of auxiliary feedwater typically results in more severe consequences (i.e., increased cooldown). Since decay heat loads are significantly reduced at the time of transition from Mode 4 to Mode 3, auxiliary feedwater flow requirements are far less significant than for other limiting transients initiated from power. Therefore, not having demonstrated operability of auxiliary feedwater prior to entry into Mode 3 will not result in increased consequences of any design basis accident initiated from Mode 3.

With respect to long-term decay heat removal, in Mode 3, only the steam generators are available for decay heat removal, and auxiliary feedwater is the only safety-related system for supplying water to the steam generators. In the event that auxiliary feedwater fails while in Mode 3, a cooldown to residual heat removal (RHR) entry conditions would be required in order to reestablish stable long-term decay heat removal.

T.S. 3.4.1.2 requires at least two steam generators to be operable during Mode 3. With a minimum indicated level, each steam generator has a substantial amount of water available to cool down the reactor coolant system (RCS), especially considering the fact that decay heat load is significantly reduced.

The low decay heat load would provide a substantial amount of time for manual

actions to align/start auxiliary feedwater, or to restore the AFW system or additional steam generators to operable status, while the (RCS) is maintained hot with decay heat removal through the steam generator safety valves.

Based on the above, it is concluded that not having demonstrated operability of the auxiliary feedwater system under the conditions which the 4.0.4 exemption would apply will not have any significant impact on the ability to maintain adequate long-term decay heat removal.

The proposed change has no impact on the probability of occurrence of any design basis accident. In addition, there is no impact on the probability of failure of AFW. No physical changes or changes in operating procedures are proposed.

2. Create the possibility of a new or different kind of accident from any previously evaluated.

The possibility of an accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report is not created. Since there are no changes in the way the plant is operated, the potential for an unanalyzed accident is not created. No new failure modes are introduced.

3. Involve a significant reduction in a margin of safety.

The proposed changes do not have any adverse impact on the protective boundaries. The margin of safety, as defined in the basis for any Technical Specification, is not reduced. The proposed changes do not adversely impact any of the safety systems, nor do they increase the number of challenges to the safety systems.

Accordingly, the Commission proposes to determine that this change does not involve a significant hazards consideration.

The Commission is seeking public comments on this proposed determination. Any comments received within fifteen (15) days after the date of publication of this notice will be considered in making any final determination. The Commission will not normally make a final determination unless it receives a request for a hearing.

Written comments may be submitted by mail to the Regulatory Publications Branch, Division of Freedom of Information and Publications Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and should cite the publication data and page number of this Federal Register notice. Written comments may also be delivered to Room P-223, Phillips Building, 7920 Norfolk Avenue, Bethesda, Maryland, from 7:30 a.m. to 4:15 p.m. Copies of written comments received may be examined at the NRC Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC. The filing

of requests for hearing and petitions for leave to intervene is discussed below.

By September 10, 1990, The licensee may file a request for a hearing with respect to issuance of the amendment to the subject facility operating license and any person whose interest may be affected by this proceeding and who wishes to participate as a party in the proceeding must file a written request for hearing and a petition for leave to intervene. Requests for a hearing and petitions for leave to intervene shall be filed in accordance with the Commission's "Rules of Practice for Domestic Licensing Proceedings" in 10 CFR part 2. Interested persons should consult a current copy of 10 CFR 2.714 which is available at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555 and at the Local Public Document Room located at Russell Library, 123 Broad Street, Middletown, Connecticut 06457.

If a request for a hearing or petition for leave to intervene is filed by the above date, the Commission or an Atomic Safety and Licensing Board, designated by the Commission or by the Chairman of the Atomic Safety and Licensing Board Panel, will rule on the request and/or petition; and the Secretary or the designated Atomic Safety and Licensing Board will issue a notice of hearing or an appropriate order.

As required by 10 CFR 2.714, a petition for leave to intervene shall set forth with particularity the interest of the petitioner in the proceeding, and how that interest may be affected by the results of the proceeding. The petition should specifically explain the reasons why intervention should be permitted with particular reference to the following factors: (1) The nature of the petitioner's right under the Act to be made a party to the proceeding; (2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (3) the possible effect of any order which may be entered in the proceeding on the petitioner's interest. The petition should also identify the specific aspect(s) of the subject matter of the proceeding as to which petitioner wishes to intervene. Any person who has filed a petition for leave to intervene or who has been admitted as a party may amend the petition without requesting leave of the Board up to fifteen (15) days prior to the first prehearing conference scheduled in the proceeding, but such an amended petition must satisfy the specificity requirements described above.

Not later than fifteen (15) days prior to the first prehearing conference

scheduled in the proceeding, a petitioner shall file a supplement to the petition to intervene which must include a list of the contentions which are sought to be litigated in the matter. Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner shall provide a brief explanation of the bases of the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing. The petitioner must also provide references to those specific sources and documents of which the petitioner is aware and on which the petitioner intends to rely to establish those facts or expert opinion. Petitioner must provide sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact. Contentions shall be limited to matters within the scope of the amendment under consideration. The contention must be one which, if proven, would entitle the petitioner to relief. A petitioner who fails to file such a supplement which satisfies these requirements with respect to at least one contention will not be permitted to participate as a party.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing, including the opportunity to present evidence and cross-examine witnesses.

If the amendment is issued before the expiration of 30-days, the Commission will make a final determination on the issue of no significant hazards consideration. If a hearing is requested, the final determination will serve to decide when the hearing is held.

If the final determination is that the amendment request involves no significant hazards consideration, the Commission may issue the amendment and make it effective, notwithstanding the request for a hearing. Any hearing held would take place after issuance of the amendment.

If the final determination is that the amendment request involves a significant hazards consideration, any hearing held would take place before the issuance of any amendment.

Normally, the Commission will not issue the amendment until the expiration of the 15-day notice period. However, should circumstances change during the notice period, such that failure to act in a timely way would result, for example, in derating or shutdown of the facility, the

Commission may issue the license amendment before the expiration of the 15-day notice period, provided that its final determination is that the amendment involves no significant hazards consideration. The final determination will consider all public and State comments received. Should the Commission take this action, it will publish in the **Federal Register** a notice of issuance. The Commission expects that the need to take this action will occur very infrequently.

A request for a hearing or a petition for leave to intervene must be filed with the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Services Branch, or may be delivered to the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, by the above date. Where petitions are filed during the last ten (10) days of the notice period, it is requested that the petitioner promptly so inform the Commission by a toll-free telephone call to Western Union at 1-(800) 325-6000 (in Missouri 1-(800) 342-6700). The Western Union operator should be given Datagram Identification Number 3737 and the following message addressed to John F. Stolz: Petitioner's name and telephone number; date petition was mailed; plant name; and publication date and page number of this **Federal Register** notice. A copy of the petition should also be sent to the Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to Gerald Garfield, Esquire, Day, Berry & Howard, Counselors at Law City Place, Hartford, Connecticut 06103-3499, attorney for the licensee.

Nontimely filings of petitions for leave to intervene, amended petitions, supplemental petitions and/or requests for hearing will not be entertained absent a determination by the Commission, the presiding officer or the presiding Atomic Safety and Licensing Board that the petition and/or request should be granted based upon a balancing of the factors specified in 10 CFR 2.714(a)(1)(i)-(v) and 2.714(d).

For further details with respect to this action, see the application for amendment dated July 26, 1990, which is available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555, and at the Local Public Document Room, Russell Library, 123 Broad Street, Middletown, Connecticut 06457.

Dated at Rockville, Maryland, this 6th day of August, 1990.

For the Nuclear Regulatory Commission.

Alan B. Wang,

*Project Manager, Project Directorate I-4,
Division of Reactor Projects—I/II, Office of
Nuclear Reactor Regulation.*

[FR Doc. 90-18816 Filed 8-9-90; 8:45 am]

BILLING CODE 7590-01-M

[Docket No. 030-20298, License No. 35-23137-01, EA90-131]

**Petro Data, Inc., Hominy, Oklahoma,
Order Modifying License (Effective
Immediately)**

I

Petro Data, Inc. (Licensee) is the current holder of Materials License No. 35-23137-01 issued by the Nuclear Regulatory Commission ("NRC" or "Commission") pursuant to 10 CFR part 30 which authorizes the licensee, in part, to possess sealed sources of radioactive Americium-241 and Cesium-137 for use in oil and gas well logging, and Iodine-131 and Iridium-192 in any form for use in oil and gas well tracer studies. The license had initially been issued to B&H Wireline and was amended on August 3, 1990 to transfer the license from B & H Wireline Services to Petro Data, Inc. The license expired on September 30, 1989, and is under timely renewal pursuant to 10 CFR 30.37(b).

II

Petro Data, Inc. currently employs two individuals, Mr. O.C. LaMascus as Treasurer and Secretary and Mr. J.G. LaMascus as a well logging supervisor, who, as employees of other companies, were previously involved with licensed activities, as discussed below.

Mr. O.C. LaMascus was formerly president of Saturn Wireline Services, Inc., an NRC licensee. On August 29, 1986, two months following the expiration of Saturn Wireline Services, Inc.'s (SWI) NRC license, License No. 35-19797-01, a Notice of Violation (Notice) was issued to SWI for possession of NRC-licensed material without a valid NRC license. This correspondence, which was mailed to Mr. O.C. LaMascus, then president of SWI, stated that SWI was to keep licensed material in secure storage and that no additional byproduct material was to be purchased pending SWI's obtaining a valid license. In an undated response received by NRC Region IV on September 22, 1986, Mr. O.C. LaMascus, on behalf of SWI, replied that SWI's radioactive sources were in secure storage.

In correspondence received by NRC Region IV on September 3, 1986, SWI applied for a new NRC license to

possess and use the same sealed sources possessed under the authority of the company's expired NRC license. A September 30, 1986 letter from the NRC's Region IV office to SWI reiterated NRC's position that SWI's radioactive material must remain in secure storage until a valid license was obtained.

On November 13, 1986, the NRC's Region IV office wrote to SWI and asked it to provide additional information in order for the NRC to continue processing the license application. On January 13, 1987, Mr. John Condren, owner of Condren Oil Co., incorporated Satrun Services, Inc. (SSI) and subsequently purchased the assets of SWI, including the licensed material, without possessing or applying for a license. On February 20, 1987, NRC's License Fee Management Branch in Bethesda, Maryland, unaware of the purchase of SWI by Mr. John Condren and the change of the company name to SSI, wrote to SWI and informed it that until an outstanding inspection fee of \$370 plus interest of \$37.12 was paid, the NRC was discontinuing its consideration for the application for a new license. This letter also informed SWI that it was in violation of 10 CFR 30.36 for possessing byproduct material without a valid NRC license. Neither SWI nor SSI responded to the February 20, 1987 letter. Based on a telephone conversation with Mr. O.C. LaMascus on August 4, 1987, NRC Region IV issued a Confirmation of Action Letter (CAL) on the same date to SWI (addressed to Mr. O.C. LaMascus) which confirmed SWI's commitments to (1) pay the outstanding inspection fee and submit a revised license application within 10 days of his receipt of the letter, and (2) maintain radioactive materials in SWI possession in locked storage until SWI obtained a valid license. The NRC received no response to the February 20, 1987 letter. No information as to SWI's purchase by Mr. John Condren was provided to NRC at that time.

On January 10, 1989, an NRC Region IV inspector visited SWI's facility at 220 East Main Street in Hominy, OK, and determined that (1) one of SWI's radioactive sources was not in locked storage and in fact was in use on that date, (2) SWI/SSI had been using its radioactive sources regularly in the conduct of gas and oil well logging without a valid NRC license to possess and use such materials and in violation of SWI's previous commitment made by Mr. O.C. LaMascus, and (3) SWI had been purchased by Mr. John Condren and was performing licensed activities as SSI, a new corporation, without notification to and approval by the NRC as is required. The inspection also

disclosed several other apparent violations of NRC requirements associated with SWI's safe use of these sources. On January 11, 1989, Mr. O.C. LaMascus acknowledged that SWI/SSI had been using these materials without a license and agreed to transfer to an authorized recipient all licensable material, which was confirmed in a CAL issued on that date. The transfer of three sealed sources from SWI/SSI to B & H Wireline Services, 300 E. Main Street, Hominy, Oklahoma, an NRC licensee authorized to possess these materials, was carried out on the same date. On January 13, 1989, Mr. John Condren, President of SSI, committed that SSI would continue not to use radioactive material until notified otherwise by the NRC. This commitment was confirmed in a CAL issued on the same date.

On February 8, 1989, the NRC issued an Order, immediately effective, to SSI that required that SSI certify that all regulated material had been transferred to an authorized recipient and that no such material remains in SSI's possession.

On January 25, 1989, the NRC initiated an investigation into the activities of Mr. O.C. LaMascus and Mr. J.G. LaMascus involving licensed material. During the investigation, interviews were conducted with both individuals. During the investigation it was established that Mr. J.G. LaMascus had been employed by SWI from 1981 to the fall of 1986, and had worked as a logging engineer trainee. After the sale to SSI, Mr. J.G. LaMascus was hired by SSI as a well logging trainee and six months later was working alone as a well logger. During this investigation it was (1) confirmed that both of these individuals knowingly performed activities involving licensed material without a license as owner and employee, respectively, of SWI after SWI's license had expired and as employees of SSI; (2) determined that both individuals provided false information to the NRC investigator concerning which individuals, if any, at Condren Oil Company had been informed that Satrun Services Inc. needed a license to perform well logging activities; and (3) confirmed that Mr. O.C. LaMascus provided false information to the NRC when he stated verbally and later confirmed in writing that licensed material in SWI's possession had been placed in storage and was not being used.

III

Based on the results of NRC inspections and investigations, the NRC has concluded that Mr. O.C. LaMascus and Mr. J.G. LaMascus made false

statements to an NRC investigator, both individuals knowingly performed activities involving licensed material without a license, and Mr. O.C. LaMascus provided false information to the NRC verbally and in writing regarding whether the licensed material had been placed in storage and was not being used.

The conduct described above of these two individuals cannot be tolerated. The public health and safety require that all persons engaged in licensed activities provide the NRC with accurate and complete information. Based on the information provided above and the recognition that Mr. O.C. LaMascus and Mr. J.G. LaMascus are presently employed by Petro Data, Inc., I lack reasonable assurance that licensed activities conducted by or supervised by these two individuals would be conducted in accordance with NRC requirements. Accordingly, I have concluded that it is necessary that Mr. O.C. LaMascus and Mr. J.G. LaMascus be prohibited from licensed activities. Furthermore, pursuant to 10 CFR 2.201(c), 2.202(f), and 2.204, I find that the public health, safety, and interest require that this Order be immediately effective and that no prior notice is required.

Accordingly, pursuant to sections 81, 161b, 161c, 161i, 161o, 182, and 186 of the Atomic Energy Act of 1954, as amended, and 10 CFR 2.204 and 10 CFR part 30, *It is hereby ordered, Effective Immediately*, that license No. 35-23137-01 is modified as follows:

1. O. C. LaMascus is prohibited from performing or supervising licensed activities.
2. J. G. LaMascus is prohibited from performing or supervising licensed activities.

Petro Data, Inc., shall certify under oath or affirmation within 10 days of the effective date of this order that O. C. LaMascus and J. G. LaMascus will not perform or supervise licensed activities. The certification shall be sent to the Regional Administrator, USNRC Region IV, 611 Ryan Plaza Drive, suite 1000, Arlington, Texas 76011.

The Regional Administrator, Region IV, may, in writing, relax or rescind any of the above conditions upon demonstration by the Licensee of good cause.

V

The Licensee, Mr. O. C. LaMascus, Mr. J. G. LaMascus, or any other person adversely affected by this Order may submit an answer to this Order within twenty days of the date of this Order.

The answer shall set forth the matters of fact and law on which the Licensee or other person adversely affected relies and the reasons as to why the Order should have not have been issued. An answer filed within 20 days of the date of this Order may also request a hearing. Any answer or request for a hearing shall be submitted to the Secretary, U.S. Nuclear Regulatory Commission ATTN: Chief, Docketing and Servicing Section, Washington, DC 20555. Copies of the hearing request also shall be sent to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555, to the Assistant General Counsel for Hearings and Enforcement at the same address, and to the Regional Administrator, Region IV, 611 Ryan Plaza Drive, suite 1000, Arlington, Texas 76011. If a person other than the Licensee, Mr. O. C. LaMascus, or Mr. J. G. LaMascus, requests a hearing, that person shall set forth with particularity the manner in which his interest is adversely affected by this Order and shall address the criteria set forth in 10 CFR 2.714(d).

If a hearing is requested by the Licensee, Mr. O. C. LaMascus, Mr. J. G. LaMascus, or a person whose interest is adversely affected, the Commission will issue an Order designating the time and place of any hearing. If a hearing is held, the issue to be considered at such hearing shall be whether this Order should be sustained.

Upon the Licensee's, Mr. O. C. LaMascus's, and Mr. J. G. LaMascus's consent to the provisions set forth in section IV of this Order, or upon their failure to file and answer within the specified time, and in the absence of any request for hearing, the provisions specified in section IV above shall be final without further order or proceedings. An Answer or a Request for Hearing Shall Not Stay the Immediate Effectiveness of This Order.

Dated at Rockville, Maryland this 3rd of August, 1990.

For the Nuclear Regulatory Commission.

Hugh L. Thompson, Jr.,
Deputy Executive Director for Nuclear
Materials Safety, Safeguards, and Operations
Support.

[FR Doc. 90-18820 Filed 8-9-90; 8:45 am]

BILLING CODE 7590-01-M

OFFICE OF SCIENCE AND TECHNOLOGY POLICY

Second Meeting of the National Critical Technology Panel

The National Critical Technology Panel (NCTP) will meet for the second

time on August 27-28, 1990. This meeting will be held at the National Science Foundation, Board room 540, 1800 G Street NW., Washington, DC. The Panel will start its deliberations at 10 a.m. Monday 27th, and will conclude its activities on Tuesday 28th, at 1 p.m.

The purpose of this Panel is to prepare and submit to the President a biennial report on national critical technologies no later than October 1st of even-numbered years. These are to be the product and process technologies the Panel deems most critical to the U.S. and shall not exceed 30 in number in any one year.

Proposed Agenda:

- (1) Briefings by other federal agencies and public groups.
- (2) Complete development of technology taxonomy list.
- (3) Complete definition of criteria to be applied in selecting technologies.
- (4) Make first cut at selection of "critical technologies".
- (5) Define agenda and information needed for subsequent meetings.

Portions of this meeting will be closed to the public.

Inherent to this type of discussions, issues of internal personnel procedures will be addressed, that if prematurely disclosed, would significantly frustrate the implementation of decisions made requiring agency action. This is pursuant to 5 USC 552 b.(c)(2), and (9)(B). Furthermore, Panel discussions will necessitate the disclosure of information of personal nature, the disclosure of which would construe a clear unwarranted invasion of personal privacy (5 U.S.C. 552 b.(c)(6)).

Persons wishing to attend the open portion of this meeting should contact Dr. Ronald E. York, at (202) 395-3557, prior to August 23, 1990. Specific information regarding time, place, agenda for the open sessions, and list of agencies and public organizations that will be briefing the panel, will be made available upon request.

Dated: August 7, 1990.

Damar W. Hawkins,
Executive Assistant, Office of Science and
Technology Policy.

[FR Doc. 90-18855 Filed 8-9-90; 8:45 am]

BILLING CODE 3170-01-M

RAILROAD RETIREMENT BOARD

Agency Forms Submitted for OMB Review.

AGENCY: Railroad Retirement Board.

ACTION: In accordance with the Paperwork Reduction Act of 1980 (44 U.S.C. Chapter 35), the Board has submitted the following proposal(s) for the collection of information to the Office of Management and Budget for review and approval.

SUMMARY OF PROPOSAL(S):

- (1) *Collection title:* Application for Reimbursement for Hospital Insurance Services in Canada
- (2) *Form(s) submitted:* AA-104
- (3) *OMB Number:* 3220-0086
- (4) *Expiration date of current OMB clearance:* Three years from date of OMB approval
- (5) *Type of request:* Extension of the expiration date of a currently approved collection without any change in the substance or in the method of collection
- (6) *Frequency of response:* On occasion
- (7) *Respondents:* Individuals or households
- (8) *Estimated annual number of respondents:* 123
- (9) *Total annual responses:* 123
- (10) *Average time per response:* .16667 hours
- (11) *Total annual reporting hours:* 21
- (12) *Collection description:* The Railroad Retirement Board administers the Medicare program for persons covered by the railroad retirement system. The collection obtains the information needed to determine eligibility for and amount due for covered hospital service received in Canada.

ADDITIONAL INFORMATION OR

COMMENTS: Copies of the proposed forms and supporting documents can be obtained from Dennis Eagan, the agency clearance officer (312-751-4693). Comments regarding the information collection should be addressed to Ronald J. Hodapp, Railroad Retirement Board, 844 Rush Street, Chicago, Illinois 60611 and the OMB reviewer, Shannah Koss-McCallum (202-395-7316), Office of Management and Budget, Room 3002, New Executive Office Building, Washington, DC 20503.

Dennis Eagan,
Clearance Officer.

[FR Doc. 90-18782 Filed 8-9-90; 8:45 am]

BILLING CODE 7905-01-M

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-28315; File No. SR-GSCC-90-04]

Self-Regulatory Organizations; Government Securities Clearing Corporation; Order Approving a Proposed Rule Change Relating to Modification to Rule 26 Concerning Billing Procedures

August 6, 1990.

On April 24, 1990, the Government Securities Clearing Corporation ("GSCC") filed with the Securities and Exchange Commission ("Commission") a proposed rule change (SR-GSCC-90-04) pursuant to section 19(b)(1) of the Securities Exchange Act of 1934, as amended ("Act"),¹ requesting that the Commission extend GSCC's current authority to bill members, in advance, for the member's anticipated business during the following month.² Notice of the proposal was published in the *Federal Register* on May 15, 1990.³ No comments were received. This order extends the proposal until July 31, 1991.

I. Description

Prior to approval of GSCC's advance billing procedure, GSCC would bill members on or before the tenth business day of the month for charges accrued during the preceding month.⁴ The advance billing procedure allows GSCC to render bills on, or before, the fifth business day of the month prior to the month during which the anticipated use is expected. For example, a member's July billing would reflect charges for the member's anticipated use during the month of August based on the member's actual use of comparison and netting services during June.⁵ The current proposal would extend GSCC's authority to collect anticipatory fee obligations until July 31, 1991.

II. Rationale

GSCC believes that extension of the advance billing procedure will help ensure the financial soundness of GSCC. GSCC further believes the proposed rule change will promote the prompt and accurate clearance of securities

transactions for which GSCC is responsible.

III. Discussion

The Commission believes that the proposed rule change is consistent with section 17A of the Act. Specifically, the Commission believes it is consistent with section 17A(b)(3)(D) because it provides for the equitable allocation of dues, fees and charges among GSCC's participants. The Commission initially granted approval of this proposal on an accelerated basis to allow comments from GSCC members and the general public concerning the proposal.⁶ The Commission notes that no comments have been received from members or others in response to Notice of GSCC's request for an extension of the proposal.

The proposal is intended as a short-term solution to potential cash-flow difficulties. GSCC has expended substantial funds in developing a system for comparison and netting of member trades in U.S. Government securities.⁷ The U.S. Government securities market also experienced historically low trading volume in December 1989. Thus, the cash-flow shortfalls resulting from GSCC's financing of development costs and the lower than expected trading volume in the U.S. Government securities market is viewed by the Commission as having a potentially negative effect on GSCC's comparison and netting activities on behalf of participants. Extension of the proposal will allow GSCC to maintain a positive cash flow while GSCC continues to gradually expand its participant base. To the extent the proposal allows GSCC to remain in a financially sound cash-flow position, and does not impose a burden on GSCC's membership, the proposal is consistent with section 17A of the Act because it promotes the prompt clearance of securities transactions consistent with the Act.

V. Conclusion

For the reasons discussed above, the Commission finds that the proposed rule change is consistent with the Act.

It is therefore ordered, pursuant to section 19(b)(2) of the Act,⁸ that the

⁶ GSCC notified its membership of the billing procedure by an Important Notice, dated January 16, 1990. No comments were received in response to the Notice.

⁷ GSCC's previous billing procedure resulted in GSCC financing participants' operational costs associated with comparison and netting activities until payment was received from participants. See Securities Exchange Act Release No. 27587 (January 4, 1990), 55 FR 1131 (January 11, 1990).

⁸ 15 USC 78s(b)(2) (1989).

¹ 15 U.S.C. 78s(b)(1) (1989).

² GSCC filed a proposed rule change (SR-GSCC-89-15) on December 22, 1989, pursuant to section 19(b)(2) detailing the advance billing procedure. The Commission granted accelerated approval of the proposal until July 31, 1990. See Securities Exchange Act Release No. 27587 (January 4, 1990), 55 FR 1131.

³ See Securities Exchange Act Release No. 27998 (May 7, 1990), 55 FR 20231.

⁴ See GSCC Rules and Procedures, R. 26.

⁵ For a more detailed description of the proposed rule change, see Securities Exchange Act Release No. 27587 (January 4, 1990), 55 FR 1131.

proposed rule change, SR-GSCC-90-04, and hereby is, approved on a temporary basis until July 31, 1991.

For the Commission, by the Division of Market Regulation, pursuant to delegated authority.

Jonathan G. Katz,

Secretary.

[FR Doc. 90-18835 Filed 8-9-90; 8:45 am]

BILLING CODE 8010-01-M

[Rel. No. 34-28309; SR-MSE-90-10]

Self-Regulatory Organizations; Filing of Proposed Rule Change by the Midwest Stock Exchange, Inc., Relating to the Listing of Index Warrants Based on the CAC-40 Index

Pursuant to section 19(b)(1) of the Securities Exchange Act of 1934 ("Act"), 15 U.S.C. 78s(b)(1), notice is hereby given that on July 10, 1990, the Midwest Stock Exchange, Inc., ("MSE" or "Exchange") filed with the Securities and Exchange Commission ("Commission") the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The MSE is proposing to amend rule 8, Article XXVIII, of its rules in order to list index warrants based on the CAC-40 Index ("Index warrants"). In accordance with the requirements set forth in Securities Exchange Act Release No. 28133 (June 19, 1990) ("index warrant approval order"), 55 FR 26319, the MSE has submitted this filing pursuant to rule 19b-4 under the Act to obtain Commission approval to list these warrants.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and statutory basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The self-regulatory organization has prepared summaries, set forth in sections (A), (B), and (C) below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In the index warrant approval order, the Commission approved amendments to the MSE's rules permitting the listing of index warrants based on established market indexes, foreign and domestic.

In approving the aforementioned amendments, the Commission expressed interest in the impact of additional index products on U.S. markets, and stated that the MSE would be required to submit for Commission approval any specific index warrants that it proposed to trade. The MSE is now proposing to list index warrants based on the CAC-40 Index, an internationally recognized, capitalization-weighted index consisting of 40 leading stocks listed and traded on the Paris Bourse. The CAC-40 Index is calculated and managed by the Societe des Bourses Francaises.

Such index warrant issues will conform to the listing guidelines under rule 8, Article XXVIII, which provides that (1) The issuer shall have assets in excess of \$100,000,000 and otherwise substantially exceed the size and earnings requirements of MSE rule 7, Article XXVIII; (2) the term of the warrants shall be for a period ranging from one to five years from the date of issuance; and (3) the minimum public distribution of such issues shall be 1,000,000 warrants together with a minimum of 400 public holders, and the warrants shall have an aggregate market value of \$4,000,000.

CAC-40 Index warrants will be direct obligations of their issuer subject to cash-settlement during their term, and either exercisable throughout their life (*i.e.*, European style). Upon exercise, or at the warrant expiration date (if not exercisable prior to such date), the holder of a warrant structured as a "put" would receive payment in U.S. dollars to the extent that the CAC-40 Index has declined below a pre-stated cash settlement value. Conversely, holders of a warrant structured as a "call" would, upon exercise or at expiration, receive payment in U.S. dollars to the extent that the CAC-40 Index has increased above the pre-stated cash settlement value. If "out-of-the-money" at the time of expiration, the warrants would expire worthless.

The MSE has adopted suitability standards applicable to recommendations to customers of index warrants and transactions in customer accounts. Specifically, Exchange rule 3, article XLVIII, provides that the options suitability standards will be applicable to recommendations regarding Index

Warrants. The Exchange also recommends that Index Warrants be sold only to options-approved accounts. In addition, Exchange rule 6, article XLVIII, requires a Senior Registered Options Principal or a Registered Options Principal to approve and initial a discretionary order in Index Warrants on the day the order is entered. Finally, the MSE, prior to the commencement of trading in CAC-40 Index warrants, will distribute a circular to its membership calling attention to specific risks associated with warrants on the CAC-40 Index.

In the index warrant approval order, the Commission noted that, with respect to foreign index warrants, there should be an adequate mechanism for sharing surveillance information with respect to the index's component stocks. In this regard, the MSE is actively engaged in discussions with representatives of the Paris Bourse to ensure that there is an adequate mechanism for the sharing of surveillance information with respect to the CAC-40 Index's component stocks.

The Exchange believes that the proposed rule change is consistent with the requirements of the Act, and, in particular, section 6(b)(5), as the rules governing warrants are designed to prevent fraudulent and manipulative acts and practices and to promote just and equitable principles of trade, and are not designed to permit unfair discrimination between customers, issuers, brokers or dealers.

B. Self-Regulatory Organization's Statement on Burden on Competition

The MSE does not believe that the proposed rule change will impose an inappropriate burden on competition.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others

No written comments were either solicited or received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 35 days of the date of publication of this notice in the *Federal Register* or within such longer period (i) as the Commission may designate up to 90 days of such date if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

(a) By order approve such proposed rule change; or

(b) Institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing. Persons making written submissions should file six copies thereof with the Secretary, Securities and Exchange Commission, 450 Fifth Street NW., Washington, DC 20549. Copies of the submission, all subsequent amendments, all written statement with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for inspection and copying in the Commission's Public Reference Section, 450 Fifth Street NW., Washington, DC. Copies of such filing will also be available for inspection and copying at the principal office of the above-mentioned self-regulatory organization. All submission should refer to the file number in the caption above and should be submitted by August 31, 1990.

For the Commission, by the Division of Market Regulation, pursuant to delegated authority.

Dated: August 3, 1990.

Jonathan G. Katz,
Secretary.

[FR Doc. 90-18830 Filed 8-9-90; 8:45 am]

BILLING Code 8010-01-M

[Rel. No. 34-28310; File No. SR-MSE-90-11]

Self-Regulatory Organizations; Filing of Proposed Rule Change by the Midwest Stock Exchange, Inc. Relating to the Listing of Index Warrants Based on the Deutscher Aktienindex (DAX)

Pursuant to section 19(b)(1) of the Securities Exchange Act of 1934 ("Act"), 15 U.S.C. 78s(b)(1), notice is hereby given that on July 10, 1990, the Midwest Stock Exchange, Inc. ("MSE" or "Exchange") filed with the Securities and Exchange Commission ("Commission") the proposed rule change as described in Items I, II and III below, which Items have been prepared by the self-regulatory Organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The MSE is proposing to amend rule 8, Article XXVIII, of its rules in order to list index warrants based on the Deutscher Aktienindex ("DAX") ("Index warrants"). In accordance with the requirements set forth in Securities Exchange Act Release No. 28133 (June 19, 1990) ("index warrant approval order"), 55 FR 26319, the MSE has submitted this filing pursuant to rule 19b-4 under the Act to obtain Commission approval to list these warrants.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and statutory basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The self-regulatory organization has prepared summaries, set forth in sections (A), (B), and (C) below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In the index warrant approval order, the Commission approved amendments to the MSE's rules permitting the listing of index warrants based on established market indexes, foreign and domestic.

In approving the aforementioned amendments, the Commission expressed interest in the impact of additional index products on U.S. markets, and stated that the MSE would be required to submit for Commission approval any specific index warrants that it proposed to trade. The MSE is now proposing to list index warrants based on the DAX Index, an internationally recognized, capitalization-weighted index consisting of 30 leading stocks listed and traded on the Frankfurt Stock Exchange ("FSE"). The DAX Index is calculated by the FSE and is updated on a continuous basis during the trading session. Changes in the composition of the DAX are made by the FSE in consultation with the Federation of German Stock Exchange and the *Börsen-Zeitung*. The stocks included on the DAX are among the largest German corporations, whose

shares are among the most actively traded German issues.

The MSE represents that such index warrant issues will conform to the listing guidelines under Rule 8, Article XXVIII, which provides that (1) The issuer shall have assets in excess of \$100,000,000 and otherwise substantially exceed the size and earnings requirements of MSE Rule 7, Article XXVIII; (2) the term of the warrants shall be for a period ranging from one to five years from the date of issues shall be 1,000,000 warrants together with a minimum of 400 public holders, and the warrants shall have an aggregate market value of \$4,000,000.

DAX index warrants will be direct obligations of their issuer subject to cash-settlement during their term, and either exercisable throughout their life (*i.e.*, American style) or exercisable only on their expiration date (*i.e.*, European style). Upon exercise, or at the warrant expiration date (if not exercisable prior to such date), the holder of a warrant structured as a "put" would receive payment in U.S. dollars to the extent that the DAX has declined below a pre-stated cash settlement value. Conversely, holders of a warrant structured as a "call" would, upon exercise or at expiration, receive payment in U.S. dollars to the extent that the DAX has increased above the pre-stated cash settlement value. If "out-of-the-money" at the time of expiration, the warrants would expire worthless.

The MSE has adopted suitability standards applicable to recommendations to customers of index warrants and transactions in customer accounts. Specifically, Exchange rule 3, Article XLVIII, provides that the options suitability standards will be applicable to recommendations regarding Index warrants. The Exchange also recommends that Index warrants be sold only to options-approved accounts. In addition, Exchange Rule 6, Article XLVIII, requires a Senior Registered Options Principal or a Registered Options Principal to approve and initial a discretionary order in Index warrants on the day the order is entered. Finally, the MSE, prior to the commencement of trading in DAX Index warrants, will distribute a circular to its membership calling attention to specific risks associated with warrants on the DAX Index.

In the index warrant approval order, the Commission noted that, with respect to foreign index warrants, there should be an adequate mechanism for sharing surveillance information with respect to the index's component stocks. In this regard, the MSE is actively engaged in

discussions with representatives of the FSE to ensure that there is an adequate mechanism for the sharing of surveillance information with respect to the DAX's component stocks.

The Exchange believes that the proposed rule change is consistent with the requirements of the Act, and, in particular, section 6(b)(5), as the rules governing warrants are designed to prevent fraudulent and manipulative acts and practices and to promote just and equitable principles of trade, and are not designed to permit unfair discrimination between customers, issuers, brokers or dealers.

B. Self-Regulatory Organization's Statement on Burden on Competition

The MSE does not believe that the proposed rule change will impose an inappropriate burden on competition.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others

No written comments were either solicited or received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 35 days of the date of publication of this notice in the *Federal Register* or within such longer period (i) As the Commission may designate up to 90 days of such date if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organizations consents, the Commission will:

- (a) By order approve such proposed rule change, or
- (b) Institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing. Persons making written submissions should file six copies thereof with the Secretary, Securities and Exchange Commission, 450 Fifth Street, NW., Washington, DC 20549. Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for inspection and copying in the

Commission's Public Reference Section, 450 Fifth Street, NW., Washington, DC. Copies of such filing will also be available for inspection and copying at the principal office of the above-mentioned self-regulatory organization. All submissions should refer to the file number in the caption above and should be submitted by August 31, 1990.

For the Commission, by the Division of Market Regulation, pursuant to delegated authority.

Dated: August 3, 1990.

Jonathan G. Katz,
Secretary.

[FR Doc. 90-18831 Filed 8-9-90; 8:45 am]

BILLING CODE 8010-01-M

[Release No. 34-28312; File No. SR-NASD-90-39]

Self-Regulatory Organizations; Filing and Immediate Effectiveness of Proposed Rule Change by National Association of Securities Dealers, Inc. Relating to Effective Date for Amendments to Rules of Fair Practice

Pursuant to section 19(b)(1) of the Securities Exchange Act of 1934 ("Act"), 15 U.S.C. 78s(b)(1), notice is hereby given that on July 23, 1990 the National Association of Securities Dealers, Inc. ("NASD" or "Association") filed with the Securities and Exchange Commission ("SEC" or "Commission") the proposed rule change as described in Items I, II, and III below, which Items have been prepared by the NASD. The NASD has designated this proposal as one constituting both a stated policy with respect to the enforcement of an existing rule of the NASD and the interpretation of an existing rule under section 19(b)(3)(A)(i) of the Act, which renders the rule effective upon the Commission's receipt of this filing. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The proposed rule change addresses the enforcement by the NASD of previous amendments to the Association's Rules of Fair Practice, and the effective date of the amendments.

II. Self-Regulatory Organization's Statement of the Purpose of and Statutory Basis for the Proposed Rule Change

In its filing with the Commission, the NASD included statements concerning the purpose of, and basis for, the proposed rule change and discussed any

comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The NASD has prepared summaries, set forth in sections (A), (B), and (C) below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

On May 2, 1990, the Commission approved SR-NASD-90-9,¹ which amended Article III, sections 2 and 21(c) of the NASD's Rules of Fair Practice. The rule change required NASD members to obtain additional information for customer accounts, as well as sufficient information to permit member firms to make more informed determinations about accounts and investment recommendations. As ample time is needed for affected members and persons to comply with the changes by revising necessary forms and internal procedures, the NASD has determined that it is in the public interest to delay effectiveness of the changes to January 1, 1991.

The NASD is aware that there are members that may currently have amended their procedures to be in compliance with the amendments. Further, there may be other members that are not, as yet, in compliance. The NASD believes it to be in the public interest to provide a consistent application of the rule by amending the change to Article III, section 21(c) and interpreting, consistent therewith, Article III, section 2, for both to become effective January 1, 1991. Thus, those members that are currently in compliance will not be deemed to have violated the proposed rule change if they were to cease their compliance procedures between the effectiveness of this rule filing and January 1, 1991.

The Association believes that the policy is consistent with section 15A(b)(6) of the Act, which provides, *inter alia*, that the rules of a national securities association shall be designed to promote just and equitable principles of trade and to protect investors and the public interest.

B. Self-Regulatory Organization's Statement on Burden on Competition

The NASD does not believe that the proposed rule change imposes any burden on competition not necessary or

¹ See Securities Exchange Act Release No. 27982 (May 2, 1990), 55 FR 19402 (May 9, 1990).

appropriate in furtherance of the purposes of the Act, as amended.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

Comments were neither solicited nor received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to section 19(b)(3)(A)(i) of the Act and subparagraph (e) of Rule 19b-4 thereunder in that it constitutes a stated policy with respect to the enforcement of an existing rule as well as the interpretation of an existing rule. At any time within 60 days of the filing of a rule change pursuant to section 19(b)(3)(A) of the Act, the Commission may summarily abrogate the rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing. Persons making written submissions should file six copies thereof with the Secretary, Securities and Exchange Commission, 450 Fifth Street, NW., Washington, DC 20549. Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for inspection and copying in the Commission's Public Reference Room. Copies of the filing will also be available for inspection and copying at the principal office of the NASD. All submissions should refer to the file number in the caption above and should be submitted by August 31, 1990.

For the Commission, by the Division of Market Regulation, pursuant to delegated authority, 17 CFR 200.30-3(a)(12).

Dated: August 3, 1990.

Jonathan G. Katz,
Secretary.

[FR Doc. 90-18833 Filed 8-9-90; 8:45 am]

BILLING CODE 8010-01-M

[Release No. 34-28311; File No. SR-NSCC-90-13]

Self-Regulatory Organizations; Proposed Rule Change by the National Securities Clearing Corporation Regarding an Agreement Between NSCC and the Chicago Board Options Exchange, Inc.

August 3, 1990.

Pursuant to section 19(b)(1) of the Securities Exchange Act of 1934, 15 U.S.C. 78s(b)(1), notice is hereby given that on July 16, 1990 NSCC filed with the Securities and Exchange Commission ("Commission") the proposed rule change as described in Items I, II, and III below, which Items have been prepared by NSCC. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The proposed rule change consists of an agreement between NSCC and CBOE for acceptance by NSCC of CBOE trade data for input into NSCC's processing systems on behalf of participating NSCC members.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, NSCC included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. NSCC has prepared summaries, set forth in sections (A), (B), and (C) below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Proposed Rule Change

(1) The purpose of the proposed rule change is to file with the Commission the agreement between NSCC and CBOE, which provides for acceptance by NSCC of CBOE trade data for input into NSCC's processing systems on behalf of participating NSCC members. The agreement covers submission to NSCC of Super Shares traded on the CBOE, as well as any other NSCC cleared security traded on the CBOE.

NSCC currently has the authority, pursuant to rule 7, section 5, to accept trade data from self-regulatory organizations on behalf of members. Since CBOE data may reflect trades between members of NSCC and

members of interfacing clearing corporations, an agreement between CBOE and NSCC is necessary to detail the obligations of NSCC with respect to the settlement of such transactions.

The agreement provides that the responsibility to settle a transaction, as between NSCC and interfacing clearing corporations, will be subject to the terms of the Interregional Interface Agreement entered into between the entities.

Operationally, the submission of trade data from CBOE will function the same as submissions of trade data to NSCC from the New York Stock Exchange, the American Stock Exchange, the American Stock Exchange and the National Association of Securities Dealers, Inc. Trades reported to NSCC from CBOE will be considered locked-in and reported to members on the Regional Interface Clearing Report.

(2) Since the rule change will facilitate the prompt and accurate clearance and settlement of securities transactions, it is consistent with section 17A(b)(3)(F) of the Act, and the rules and regulations under the Act, applicable to NSCC.

B. Self-Regulatory Organization's Statement on Burden on Competition

NSCC does not believe that the proposed rule will have an impact or impose a burden on competition.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others

No written comments have been solicited or received. NSCC will notify the Commission of any written comments received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 35 days of the date of publication of this notice in the *Federal Register* or within such longer period (i) as the Commission may designate up to 90 days of such date if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

(A) By order approve such proposed rule change, or

(B) Institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing.

Persons making written submissions should file six copies thereof with the Secretary, Securities and Exchange Commission, 450 Fifth Street NW., Washington, DC 20549. Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for inspection and copying in the Commission's Public Reference Section, 450 Fifth Street NW., Washington, DC 20549. Copies of such filing will also be available for inspection and copying at the principal office of NSCC. All submissions should refer to file number SR-NSCC-90-13 and should be submitted by August 31, 1990.

For the Commission, by the Division of Market Regulation, pursuant to delegated authority.

Jonathan G. Katz,
Secretary.

FR Doc. 90-18832 Filed 8-9-90; 8:45 am

BILLING CODE 8010-01-M

[Rel. No. IC-17654; 811-3655]

Dranoel, Inc. (Formerly Consolidated Accessories Corporation); Application for Deregistration

August 6, 1990.

AGENCY: Securities and Exchange Commission ("SEC").

ACTION: Notice of application for deregistration under the Investment Company Act of 1940 (the "Act").

APPLICANT: Dranoel, Inc. (formerly Consolidated Accessories Corporation) ("Applicant").

RELEVANT 1940 ACT SECTION: Section 8(f).

SUMMARY OF APPLICATION: Applicant seeks an order declaring that it has ceased to be an investment company under the Act.

FILING DATES: The application on Form N-8F was filed on July 3, 1989, and amended on May 14 and July 23, 1990.

HEARING OR NOTIFICATION OF HEARING: An order granting the application will be issued unless the SEC orders a hearing. Interested persons may request a hearing by writing to the SEC's Secretary and serving Applicant with a copy of the request, personally or by mail. Hearing requests should be received by the SEC by 5:30 p.m. on August 31, 1990, and should be

accompanied by proof of service on Applicant, in the form of an affidavit or, for lawyers, a certificate of service. Hearing requests should state the nature of the writer's interest, the reason for the request, and the issues contested. Persons may request notification of a hearing by writing to the SEC's Secretary.

ADDRESSES: Secretary, SEC, 450 Fifth Street, NW., Washington, DC 20549. Applicant, 11117 Eastview Circle, Dallas, Texas 75230.

FOR FURTHER INFORMATION CONTACT: Eva Marie Carney, Staff Attorney, at (202) 504-2274, or Max Berueffy, Branch Chief, (202) 272-3016 (Division of Investment Management, Office of Investment Company Regulation).

SUPPLEMENTARY INFORMATION: Following is a summary of the application. The complete application may be obtained for a fee at the SEC's Public Reference Branch or by contacting the SEC's commercial copier at (800) 231-3282 (in Maryland (301) 258-4300).

Applicant's Representations:

1. Applicant is a closed-end non-diversified management investment company organized as a corporation under the laws of the State of Texas. On April 29, 1969, prior to Applicant's existence and registration as a management investment company, Applicant, under its predecessor name, Consolidated Accessories Corporation ("CAC"), registered 200,000 shares of common stock on Form S-1 in accordance with the Securities Act of 1933. The registration statement became effective on May 28, 1969, and the public offering of CAC common stock commenced thereafter.

2. Pursuant to an Agreement of Purchase and Sale dated as of July 26, 1982 by and between Applicant and its wholly-owned subsidiaries and New CAC Corporation, a Delaware corporation ("New CAC"), Applicant and its subsidiaries sold substantially all of their assets to New CAC and New CAC assumed substantially all of their liabilities (the "Asset Sale"). Applicant subsequently amended its Articles of Incorporation to change its name to that under which the present application is filed, "Dranoel, Inc."

3. In December 1982, following the Asset Sale, Applicant offered to purchase up to all of the shares of its common stock for \$12.10 per share. Applicant states that the offer to purchase provided shareholders with the opportunity to realize cash for their shares in lieu of continuing as a shareholder in a new business. The offer

to purchase stated that since the closing date of the Asset Sale, Applicant had invested its assets in high-grade, fixed income securities, and that Applicant intended to register as an investment company under the Act as soon as practicable.

4. At the time of the offer to purchase, Applicant had outstanding 18,726 shares of common stock, which were held of record by 199 persons. The Fruhman family (Leo Fruhman, Rhea Fay Fruhman and Leonard Fruhman), collectively owned approximately 51% of the outstanding Common Stock and agreed not to tender their shares in response to Applicant's offer to purchase.

5. On January 28, 1983, Applicant filed a Notification of Registration on Form N-8A, pursuant to section 8(a) of the Act. On February 1, 1983, the subsidiaries of Applicant were merged into Applicant; in March 1983, Applicant terminated its registration under the Securities Exchange Act of 1934. On April 29, 1983, Applicant filed a registration statement on Form N-2 pursuant to the Securities Act of 1933.

6. At all times during Applicant's existence as a management investment company: (i) An aggregate of 283,660 shares of Applicant's common stock remained outstanding held by approximately 120 record holders; (ii) approximately 94% of this stock was held by the Fruhman family; (iii) substantially all of Applicant's assets consisted of debt obligations issued by states, territories, possessions of the United States, or political subdivisions thereof, exempt from federal income taxation, and Applicant distributed substantially all of its investment income to its shareholders on a quarterly basis; and (iv) Applicant issued no additional securities, and its securities did not trade on any exchange or other established securities market.

7. At a meeting held on December 17, 1987, Applicant's Board of Directors proposed that Applicant's assets be sold and that Applicant be liquidated. An Information Statement dated December 30, 1987, describing the proposal was mailed to all shareholders of record. On January 13, 1988, Applicant's shareholders approved the proposed sale and liquidation.

8. As of January 13, 1988, Applicant's 283,660 shares of common stock outstanding had a par value of \$1.00 per share, an aggregate net asset value of \$3,782,852 and a per share net asset value of approximately \$13.33. As of that date, Applicant had no shares of preferred stock issued or outstanding.

9. On January 28, 1988, Applicant's assets were sold in open market transactions. Cash proceeds in the amount of \$3,782,852 were thereafter distributed by mail to Applicant's shareholders. Aggregate payments of \$5,854.33 were returned to Applicant by the Postal Service as undeliverable, and are being held toward future demand or remittance to the State of Texas. Treasury Unclaimed Money Fund.

10. In connection with its liquidation and dissolution, Applicant incurred \$10,000 in legal expenses, \$10,000 in accounting expenses, \$3,069 in selling expenses (representing commissions based on discounts to unaffiliated selling brokers of 94 cents per \$1,000 principal amount of bonds sold), and \$3,480 in registration and transfer expenses.

11. Applicant has no shareholders, assets or liabilities. Applicant is not a party to any litigation or administrative proceeding. Applicant is not engaged, nor does it propose to engage in any business activities other than those necessary to wind up its affairs. On April 29, 1988, Applicant filed a Certificate of Dissolution pursuant to the laws of the State of Texas.

12. Applicant has filed all reports required under the Act, except for the report on Form N-SAR for the six months ended January 31, 1988, which Applicant represents shall be filed as soon as practicable.

For the Commission, by the Division of Investment Management, under delegated authority.

Jonathan G. Katz,
Secretary.

[FR Doc. 90-18834 Filed 8-9-90; 8:45 am]

BILLING CODE 8010-01-M

SMALL BUSINESS ADMINISTRATION

Reporting and Recordkeeping Requirements Under OMB Review

ACTION: Notice of reporting requirements submitted for review.

SUMMARY: Under the provisions of the Paperwork Reduction Act (44 U.S.C. chapter 35), agencies are required to submit proposed reporting and recordkeeping requirements to OMB for review and approval, and to publish a notice in the *Federal Register* notifying the public that the agency has made such a submission.

DATE: Comments should be submitted on or before September 10, 1990. If you intend to comment but cannot prepare comments promptly, please advise the OMB Reviewer and the Agency Clearance Officer before the deadline.

Copies: Request for clearance (S.F. 83), supporting statement, and other documents submitted to OMB for review may be obtained from the Agency Clearance Officer. Submit comments to the Agency Clearance Officer and the OMB Reviewer.

FOR FURTHER INFORMATION CONTACT:

Agency clearance officer: William Cline, Small Business Administration, 1441 L Street, NW., Room 200, Washington, DC 20416, Telephone: (202) 653-8538

OMB reviewer: Gary Waxman, Office of Information and Regulatory Affairs, Office of Management and Budget, New Executive Office Building, Washington, DC 20503, Telephone: (202) 395-7340.

Title: Debt Collection Activities and Financial Statement of Debtor
Form no.: 770

Frequency: On occasion

Description of respondents: Recipients of SBA Loans

Annual responses: 173,800

Annual burden hours: 173,800

Title: Other Borrower Reports, Records and Requests

Form no.: n/a

Frequency: On occasion

Description of respondents: Recipients of SBA Loans

Annual responses: 225,000

Annual burden hours: 168,750

Title: Executive Qualifications Questionnaire

Form no.: 2014A

Frequency: On occasion

Description of respondents: Senior Executive Service Applicants

Annual responses: 60

Annual burden hours: 120

Title: Reporting and Recordkeeping Requirements on Small Business Lending Companies 13 CFR 120-302-1(d), (e), (h), (i), (k) through (q), 120.303-2 through 6 and 120.304

Form no.: n/a

Frequency: On occasion

Description of respondents: Small Business Lending Companies

Annual responses: 16

Annual burden hours: 960

Title: Reporting and Recordkeeping Requirements for Lenders: 13 CFR 120.104(e), 120.200-2 and 122.8-4(g)

Form no.: n/a

Frequency: On occasion

Description of respondents: Small Business Lenders

Annual responses: 2410

Annual burden hours: 2410

William Cline,

Chief, Administrative Information Branch.

[FR Doc. 90-18770 Filed 8-9-90; 8:45 am]

BILLING CODE 8025-01-M

[Declaration of Disaster Loan Area No. 2433; Amdt. No. 3]

Declaration of Disaster Loan; Illinois

The above-numbered Declaration is hereby amended in accordance with an amendment dated July 19, 1990, to the President's major disaster declaration of June 22, to include the counties of Bureau, Henry, Jo Daviess, and Marshall as a disaster area as a result of damages caused by severe storms, flooding, and tornadoes beginning May 15 and continuing through July 3, 1990.

In addition, applications for economic injury loans from small businesses located in the contiguous country of Stark in the State of Illinois may be filed until the specified date at the previously designated location.

Any counties contiguous to the above-named primary counties and not listed herein have previously been named as contiguous or primary counties for the same occurrence.

All other information remains the same, i.e., the termination date for filing applications for physical damage is August 21, 1990, and for economic injury until the close of business on March 22, 1991.

(Catalog of Federal Domestic Assistance Program Nos. 59002 and 59008).

Dated: August 2, 1990.

Michael E. Deegan,

Acting Assistant Administrator for Disaster Assistance.

[FR Doc. 90-18769 Filed 8-9-90; 8:45 am]

BILLING CODE 8025-01-M

Public Meeting; Madison, WS

The National Small Business Development Center Advisory Board will hold a public meeting on Thursday, September 13, 1990 from 8:30 a.m. to 10:00 a.m. at the Wisconsin Small Business Development Center, University of Wisconsin, and Friday, September 14, 1990 from 2:00 p.m. to 3:30 p.m. at the Concourse Hotel, One West Dayton Street, Madison, Wisconsin.

The purpose of the meeting is to discuss such matters as may be presented by Advisory Board Members, staff of the U.S. Small Business Administration, or others present.

For further information, write or call Mr. Hardy Patten, SBA, Room 317, U.S. Small Business Administration, 1441 L Street, NW., Washington, DC 20416, telephone (202) 653-6315.

Dated: August 3, 1990.

Jean M. Nowak,

Director, Office of Advisory Councils.

[FR Doc. 90-18768 Filed 8-9-90; 8:45 am]

BILLING CODE 8025-01-M

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Environmental Impact Statement; Wasatch and Duchesne Counties, UT

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice of intent.

SUMMARY: The FHWA is issuing this notice to advise the public that an environmental impact statement will be prepared for a proposed highway project in Wasatch and Duchesne Counties, Utah.

FOR FURTHER INFORMATION CONTACT: W.R. Bird, Environmental Planning Engineer, Federal Highway Administration, P.O. Box 25246, Denver, Colorado 80225, telephone 303-236-3468.

SUPPLEMENTARY INFORMATION: The FHWA, in cooperation with Uinta National Forest and the Utah Department of Transportation, will prepare an environmental impact statement (EIS) on a proposed transportation improvement linking the Duchesne Valley in Duchesne County, Utah with the Heber/Kamas Valleys in Wasatch and Summit Counties, Utah.

An Environmental Assessment for a portion of the proposed improvement, including 10.4 miles of Utah Forest Highway 5 (State Highway 35), was completed on November 20, 1989. As a result of verbal and written comments received and public hearing response, FHWA has determined that an Environmental Impact Statement should be prepared for this proposal.

Alternatives under consideration include (1) the "no build," (2) improvement of the existing highway facility to appropriate American Association of State Highway and Transportation Officials' design criteria, (3) lesser improvements to the existing facility, and (4) alternatives, including corridors other than the existing Utah Forest Highway 5 corridor, that may be developed during the scoping process.

Public meetings and hearings, and meetings with interested agencies will be held in the project area. Public scoping meetings will be held at the Tabiona School auditorium in Tabiona, Utah at 7 p.m. on September 19, 1990, and at the Kamas Middle School auditorium in Kamas, Utah at 7 p.m. on September 20, 1990.

To ensure that the full range of issues related to the proposed action are addressed and all significant issues identified, comments and suggestions are invited from all interested parties. Comments and questions concerning the proposed action should be directed to the FHWA at the address provided above. All comments received by the FHWA to date, written and verbal, will be considered and included as part of the scoping process.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Research, Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program)

Issued on: August 1, 1990.

Jerry L. Budwig,

Division Engineer, Denver, CO.

[FR Doc. 90-18745 Filed 8-9-90; 8:45 am]

BILLING CODE 4910-22-M

DEPARTMENT OF THE TREASURY

Federal Law Enforcement Training Center

Meeting of the Advisory Committee to the National Center for State and Local Law Enforcement Training; Artesia, NM

AGENCY: Advisory Committee to the National Center for State and Local Law Enforcement Training.

ACTION: Notice of meeting.

SUMMARY: The agenda for this meeting includes: Opening remarks by the Director of the Federal Law Enforcement Training Center and Committee Co-chairs; discussion of FY 91 training program status; new Operation Alliance activities; Needs Assessment report follow-up; program development activities; Fellowship Program report; and discussion of AIDS Conference.

DATES: August 29, 1990.

ADDRESSES: Federal Law Enforcement Training Center, Artesia, New Mexico.

FOR FURTHER INFORMATION CONTACT: Hobart M. Henson, Assistant Director, Office of State and Local Training, Federal Law Enforcement Training Center, Glyncro, Georgia 31524.

Charles F. Rinkevich,
Director.

[FR Doc. 90-18775 Filed 8-9-90; 8:45 am]

BILLING CODE 4810-32-M

Internal Revenue Service (IRS)

Commissioner's Advisory Group; Open Meeting

There will be a meeting of the Commissioner's Advisory Group on August 29 & 30, 1990. The meeting will be held in Room 3313 of the Internal Revenue Service Building. The building is located at 1111 Constitution Avenue, NW., Washington, DC. The meeting will begin at 8:30 a.m. on Wednesday, August 29 and 10:30 a.m. on Thursday, August 30, 1990. The agenda will include the following topics:

Wednesday, August 29, 1990

Corporate Critical Success Factors
Circular 230

Nonfilers—How to Get Taxpayers Back into the System

Quality at the IRS

The Examination Process in the CEP

Tax Systems Modernization: Successes and Future Developments

Wage Reporting: Standards for Electronic Receipt of Information Documents

Thursday, August 30, 1990

Accounts Receivable

Research Topics

Q & A and News Items

Note.—Last minute changes to the day or order of topic discussion are possible and could prevent effective advance notice.

The meeting, which will be open to the public, will be in a room that accommodates approximately 50 people, including members of the Commissioner's Advisory Group and IRS officials. Due to the limited conference space, notification of intent to attend the meeting must be with Robert F. Hilgen, Assistant to the Senior Deputy Commissioner no later than August 17, 1990. Mr. Hilgen may be reached on (202) 566-4143 (not toll-free).

If you would like to have the committee consider a written statement, please call or write Robert F. Hilgen, Assistant to the Senior Deputy Commissioner, Internal Revenue Service, 1111 Constitution Avenue, NW., C:SD Room 3014, Washington, DC 20224.

FOR FURTHER INFORMATION CONTACT: Robert F. Hilgen, Assistant to the Senior Deputy Commissioner, (202) 566-4143 (not toll free).

Fred T. Goldberg, Jr.,
Commissioner.

[FR Doc. 90-18743 Filed 8-9-90; 8:45 am]

BILLING CODE 4830-01-M

UNITED STATES INFORMATION AGENCY

Grants Program for Private, Non-Profit Organizations in Support of International and Cultural Activities

The Office of Citizen Exchanges (formerly known as the Office of Private Sector Programs) of the United States Information Agency (USIA) announces an Initiative Grant program to U.S. nonprofit organizations for projects that support the aims of the Bureau of Educational and Cultural Affairs. Interested applicants are urged to read the complete **Federal Register** announcement before making inquiries to the Office.

General Information

The Office of Citizen Exchanges of the United States Information Agency announces a program to encourage through limited grants to nonprofit institutions, increased private sector commitment to and involvement in international exchanges.

The Office is a networking instrument that seeks to link the international exchange interests of U.S. private sector nonprofit institutions and organized groups with their counterparts abroad, preferably on a long-term basis. Projects must feature an international people-to-people component, have a professional and cultural focus, and make a substantial to long-term communication and understanding between the United States and the countries specified in this announcement.

The Office's programs focus on substantive issues of mutual interest, and the projects it supports should be intellectual and cultural, not technical in nature. Each private sector activity must maintain a non-political character and shall represent in a balanced way the diversity of American political, social and cultural life. Programs under the authority of the Bureau of Educational and Cultural Affairs shall maintain scholarly integrity and meet the highest professional standards. The participation of respected universities and/or professional associations and other major cultural institutions is encouraged.

Request for Proposals for an Initiative Grant Project Francophone Africa: State and Local Government

The Office of Citizen Exchanges of the United States Information Agency (USIA) announces an Initiative Grant program open to U.S. nonprofit institutions to develop and administer a seventeen day seminar/exchange tour focusing on the administrative and

legislative apparatus of U.S. state and local government for delegates from Francophone African nations.

Scheduled to take place in late 1990 or early 1991, the program will emphasize the interrelationship between state and local government while familiarizing the participants with a number of political support institutions. The program will consist of two phases. The first is designed to introduce the delegates to the American state-local model of government. The second phase is to provide a hands-on experience in a state capital or locality. Activities should focus on local government apparatus, including the municipality, town, county, special district and school district. The program will also present case studies of the decision making process concerning such areas as rural education services and agricultural extension services.

Background

Most Francophone African countries at independence adopted the French administrative system of government. In this model, the central government plays the leading role in the administration of local affairs. For example, Ivory Coast is divided into 34 departments, each administered by a prefect—or governor—appointed by the central government. Gabon's nine provinces are divided into 36 prefectures and 8 separate subprefectures. The provincial governors, the prefects and the subprefects are appointed by the president. In Benin, the six provincial governors are members of the National Executive Council. Cabinet ministers are also members of the council, which, according to the constitution, is the supreme administrative and executive body.

Political developments in several Francophone African countries in 1990 are likely to impact on the administrators responsible for meeting the needs of citizens on the local level. In Benin, a constitutional commission began drafting a new constitution which political leaders said would create a political system similar to the U.S. system. In Gabon, a series of strikes and rallies convinced President Omar Bongo to declare an end to 22 years of one-party rule and to schedule multi-party legislative elections. President Felix Houphouët-Boigny of Ivory Coast abandoned his opposition to democratic reforms and announced plans for multi-party elections. These developments raise the possibility of further modifications in governmental structures.

The U.S. state-local system of government emphasizes local control

over the decision making process in response to a range of social and economic questions. American concepts regarding the relationship between local governments, the states and the federal government offer Francophone African governments an alternative model to the French administrative system of government.

In FY-88, the Office of Citizen Exchanges awarded grants for two projects highlighting the administrative and legislative apparatus of state and local government in the United States. The first was a study tour for seven High Commissioners from Burkina Faso's Ministry of State and Territorial Administration. The second was a similar program involving state and local administrators from selected Francophone African countries. Both programs successfully met the objective of familiarizing participants with the U.S. model of state and local government.

The Office of Citizen Exchanges has revised this program in light of these earlier experiences placing greater emphasis now on comparative models, practical applications geared to the needs of Africans, and follow-on programming.

Program Description

The program design serves only as a broad sketch for the grantee organization's proposal. Its primary purpose is to delineate some of the priorities, programming sessions and appointments that USIA deems important to the success of this project. The grantee institution will advance the program's objectives through a series of workshops, observation tours and on-site visits. The program will compare state, state-local and local tiers of government.

The program could commence in Washington, DC with a general introduction to the U.S. system of federal, state and local government. The program should provide a scholarly overview of inter-governmental relations, communications patterns and the functional areas of mutual collaboration.

At the National Council on State Legislatures, or similar Washington-based private sector civic organization, the delegation might review the state's traditional powers as prescribed in the tenth amendment of the U.S. Constitution (The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people). The presenters will elaborate on the state's role as an

intermediary between federal and local government. Three phases in American history—the Jacksonian Era, the New Deal, and Post World War II—could serve as a framework to discuss the evolution of the state's delegated and implied powers. In addition, a panel devoted to several public services, such as transportation or the construction of roads and highways, might be arranged to examine various issues from the federal perspective, such as sources of financial support and decisions making authority.

The delegates could then attend a series of workshops on the state-local model of government. Experts on the topic would discuss the five units of local government: The municipality, county, township, school district, and special district and salient characteristics of these units in the distribution of services. At least one panel will compare the functioning of local government units in selected geographic areas of the United States. For example, the role of the town in New England might be contrasted with that of the municipality in the Southwest. The administrative system in Louisiana could serve to illustrate to the African delegates the application of French law here in the United States. The workshops might conclude with a discussion of the impact of future population and demographic patterns on the institutions of state and local government.

The remaining sessions in Washington, DC could examine other aspects of intergovernmental affairs. Appointments with congressional members of the Senate and House Subcommittees on Intergovernmental Relations and Human Resources would be considered an important facet of the project. The process of lobbying might be introduced at one of the associations representing the interests of state and local government.

The grantee organization could consider meetings with groups such as the National Black Caucus of Local Elected Officials and the National Black Caucus of State Legislators. Discussions could focus on efforts by local officials from across the country to exchange ideas and pool efforts on behalf of a particular constituency. These discussions could be of particular interest to the African delegates by illustrating the successful efforts of African Americans to work within the political system, beginning with the state and local level, and ultimately influencing decision-making on the federal level.

Visits to tourist and cultural sites will be dispersed throughout the program in

addition to appropriate appointments at the Department of State and USIA.

Phase 2

The delegation will visit state and local governments during the second phase of the project. The hands-on observation tour will complement the analytical and informational discussions held in Washington, DC, while allowing the participants to examine the opinions and perspectives of state and local officials towards the federal government. The grantee organization might consider state capitals whose demographic and economic features correspond to the broadest extent possible the physical and developmental conditions existing in the delegates' home countries.

The program could commence with a concise history of the state and locality during the nineteenth and twentieth centuries. The delegation will visit the governor's office of the respective state, and have a series of appointments at departments engaged either in road construction or community development. The briefings will address the role, function and responsibilities of the governor, including his relationship to the state legislature. It will also examine the interrelationship of state and federal governments, the raising of revenues and disbursing of services.

Following, the delegation will compare models of municipal and local government. Presentations might examine local governmental structure such as a mayor dominated or council board system. A list of additional topics the grantee organization might consider using follows:

- The legal authority within a state constitution for the existence of local government and its distribution of services
- Fiscal Allocation: Responsibility of the State and Local Tiers of Government for Health, Education, and Public Welfare
- Sources of Finance for Local Government Expenditures: Personal Income tax and Property Tax
- The Procedure for Local Referenda
- Decentralization of Decision-making in Fiscal Affairs, and
- Resolution of Conflict between State and Local Authorities

During this second phase, the delegation might visit a town hall meeting to witness public debate and involvement of the community in determining its own affairs. A public hearing on agricultural policy or the creation of jobs for a depressed segment of the community might be of interest to the African delegates.

Rationale and Objective

Many Francophone African governments have taken steps to implement democratic reforms. The measures are likely to have an impact on governmental structures and officials holding administrative posts. Most Francophone African countries have highly centralized systems of government. Provincial and local administrators, in most cases, are appointed by the executive branch or the ruling political party.

The objective of the program is to expose the delegates to the American state-local model of government and its position in a federalist system. An introduction to political, nonprofit and academic institutions involved with local government will also provide substantive information that could be applicable to the sociopolitical development of these countries. The program should also examine ways in which local authorities, representing all ethnic and minority groups, insure that the state and federal governments provide the necessary services for which they are taxed.

Selection of Participants

The study group will consist of 10 delegates from Francophone African countries. Candidates should be provincial governors, regional high commissioners, officials from the Ministry of State and Territorial Administration or other local administrators. The grantee will select the U.S. participants. United States Information Service personnel overseas will nominate the other participants in concert with USIA and the grantee institution. The participants will be fluent in French with at least a working knowledge of English.

Budget and Funding Requirements

Competition for USIA funding support is keen. Final selection will depend on the substantive nature of the program, the applicant's ability to carry it through to a successful conclusion, and cost-effectiveness—including in-kind contributions and ability to keep overhead costs at a minimum. USIA can devote between \$75,000 and \$85,000, or less, for this program. USIA will consider funding most travel and per diem costs as suggested along the following guidelines: international and domestic travel for 10 African participants; per diem not to exceed 120 dollars per day per participant; a one-time book and cultural allowance payment for each participant; travel and per diem for one staff person to accompany the delegation to

Washington, DC; travel and per diem (salaries are provided by USIA/State Department Language Services) for two seminar-quality escort/interpreters (from their homes in Washington, DC or other part of the U.S. to the institution site and return—approximate cost 250 dollars); consultant fees, if necessary, to provide background on current political and administrative conditions in the relevant Francophone African countries; translation of program booklet; excess baggage not to exceed 105 dollars per participant; and local guest speaker fees at 100 dollars per presentation. USIA is able to make modest contributions to defray administrative costs such as secretarial assistance and other administrative expenses including telex, telephone and reproduction. These categories are illustrative and the grantee institution may wish to cover any of them through in-kind contributions or other resources. Detailed three-column budgets are required summarizing funding amounts requested from USIA, institutional or other contributions, and total costs. We encourage competing institutions to provide significant cost-sharing for the entire exchange program.

Following is an example of the required budget format:

Line item	USIA support	Cost sharing	Total
Travel, per diem, etc....			
Total.....	\$	\$	\$

Additional Application Guidelines

The Office of Citizen Exchanges offers the following guidelines to prospective grant applicants:

Projects supported by the Office of Citizen Exchange are intended to further USIA goals by assisting U.S. private sector organizations in their efforts to advance international understanding in areas identified as important for bilateral relations. The Office welcomes clearly defined projects and requires that USIS posts be involved in the nomination of foreign participants, with a view toward building ongoing institutional linkages between foreign and U.S. institutions. Programs may take place anywhere in the United States or, in some instances, overseas in general accordance with the USIA program design.

Programs taking place in the United States should feature some geographic diversity in order to expose foreign participants to various regions.

Proposals should explicitly deal with translation and interpretation requirements, if any.

The Office does not support conferences or symposia except insofar as they are integral parts of a larger project that meets the USIA objectives defined in a request for proposals. In applications for funds to cover seminar costs as part of a larger project, proposals should include a detailed agenda, clearly identified speakers/presenters (and the professional-academic credentials thereof), and a careful explanation of the role of participants from other countries in the conference. The participation of a respected university or scholarly organization would in many cases be advantageous. Further, the themes addressed in such meeting must be of long-term importance rather than focused on current events or short-term issues. In every case, a substantial rationale must be presented as part of the proposal, one that clearly indicates the distinctive and important contribution the conference or symposium will yield. Projects that duplicate what is routinely carried out by private sector and/or public sector operations will not be considered, nor does the Office support film festivals.

In most cases, the Office will not provide funding merely to enable foreign participants to attend a conference on a few days' visit, and no funding is available simply to send U.S. citizens to conferences overseas. Competing grantee institutions must demonstrate an established track record (at least four years) in conducting exchange programs in order to be technically eligible for consideration.

On receipt of a letter of interest from institutions, this office will send out a grant application package that includes additional guidelines.

Institutions must submit sixteen copies of the final grant proposal.

Application Deadlines

In order to receive grant application materials, prospective applicants should express their interest in writing no later than three weeks from the publication date of this announcement, to the Office of Citizens Exchanges at the address given below. On receipt of a letter of interest, the Office will forward the project concept paper and all necessary application materials. Final proposals, complete with all necessary documentation and forms, will be due by close of business six weeks from the publication date of this announcement. Incomplete or late proposals will not be reviewed.

Proposals must be in accordance with Project Proposal Information Requirements (OMB #31180175).

Because this is a competitive solicitation, representatives of the Office of Office of Citizens Exchange can only respond to technical questions posed by potential grantee institutions.

For information on such issues please contact Stephen E. Taylor:

Stephen E. Taylor, Initiative Grants and Bilateral Accords Division, Office of Citizens Exchanges, United States Information Agency, Room 220, 301 4th Street, SW., Washington, DC 20547.

Attention: State and Local Government/
Francophone Africa Project,
Telephone: (202) 619-5319,
Fax: (202) 619-4350.

Dated: August 3, 1990.

Stephen J. Schwartz,
Director, Office of Citizens Exchanges.
[FR Doc. 90-18779 Filed 8-9-90; 8:45 am]

BILLING CODE 8230-01-M

A Grants Program for Private Not-For-Profit Organizations in Support of International Educational and Cultural Activities

The United States Information Agency's Division for the Study of the U.S. seeks to secure the services of an institution to coordinate and implement six thirty-day study programs in the field of American studies for foreign secondary school educators. The programs will take place in the period from mid-March to early November of 1991.

The Division for the Study of the U.S. provides opportunities for foreign education ministry officials, teacher trainers, textbook writers, and curriculum developers to receive information, training, and resource materials which will enable them to enhance or update what is taught about the U.S. in the secondary schools of their home countries.

Interested programming institutions in metropolitan Washington, DC, with experience in international education, in particular the social sciences, should submit a request for complete application materials to Mr. Richard Taylor at the following address no later than 15 working days from the date of this notice. The Division for the Study of the U.S. will then forward a set of materials which contains the proposal guidelines and project prospectus. This announcement is not a solicitation for proposals. It requests letters of interest from potential grantee institutions.

Information on proposal submission deadlines will be forwarded with the application materials.

United States Information Agency,
Office of Academic Programs,
Division for the Study of the U.S., E/
AAS—Attn: Richard Taylor, room 256,
301 4th Street, SW., Washington, DC
20547, Phone: (202) 619-4578.

Dated: August 1, 1990.

Guy Story Brown,

Director, Office of Academic Programs.

[FR Doc. 90-18777 Filed 8-9-90; 8:45 am]

BILLING CODE 8230-01-M

Sunshine Act Meetings

Federal Register

Vol. 55, No. 155

Friday, August 10, 1990

This section of the FEDERAL REGISTER contains notices of meetings published under the "Government in the Sunshine Act" (Pub. L. 94-409) 5 U.S.C. 552b(e)(3).

FEDERAL DEPOSIT INSURANCE CORPORATION

Notice of Agency Meeting

Pursuant to the provisions of the "Government in the Sunshine Act" (5 U.S.C. 552b), notice is hereby given that the Federal Deposit Insurance Corporation's Board of Directors will meet in open session at 2:00 p.m. on Tuesday, August 14, 1990, to consider the following matters:

SUMMARY AGENDA: No substantive discussion of the following items is anticipated. These matters will be resolved with a single vote unless a member of the Board of Directors requests that an item be moved to the discussion agenda.

Disposition of minutes of previous meetings.

Reports of actions approved by the standing committees of the Corporation and by officers of the Corporation pursuant to authority delegated by the Board of Directors.

Discussion Agenda:

Memorandum and resolution re: Notice of proposed removal of certain regulations relating to the conduct of conservatorships and receiverships, the provision, rates or cancellation of insurance of accounts, and the administration of the former Federal Savings and Loan Insurance Corporation insurance fund which were transferred to the FDIC because they are redundant with other FDIC regulations, or conflict with statutory law, or are unnecessary.

Motion for recognition and commendation of Rex R. Veal for his service to the Corporation.

The meeting will be held in the Board Room on the sixth floor of the FDIC Building located at 550—17th Street NW., Washington, DC

Requests for further information concerning the meeting may be directed to Mr. Hoyle L. Robinson, Executive Secretary of the Corporation, at (202) 898-3813.

Dated: August 7, 1990.

Federal Deposit Insurance Corporation.

Hoyle L. Robinson,

Executive Secretary.

[FR Doc. 90-18923 Filed 8-8-90; 9:41 am]

BILLING CODE 6714-01-M

FEDERAL DEPOSIT INSURANCE CORPORATION

Notice of Agency Meeting

Pursuant to the provisions of the "Government in the Sunshine Act" (5 U.S.C. 552b), notice is hereby given that at 3:00 p.m. on Tuesday, August 14, 1990, the Federal Deposit Insurance Corporation's Board of Directors will meet in closed session, by vote of the Board of Directors, pursuant to sections 552b(c)(2), (c)(6), (c)(8), (c)(9)(A)(ii), and (c)(9)(B) of Title 5, United States Code, to consider the following matters:

SUMMARY AGENDA: No substantive discussion of the following items is anticipated. These matters will be resolved with a single vote unless a member of the Board of Directors requests that an item be moved to the discussion agenda.

Recommendations with respect to the initiation, termination, or conduct of administrative enforcement proceedings (cease-and-desist proceedings, termination-of-insurance proceedings, suspension or removal proceedings, or assessment of civil money penalties) against certain insured banks or officers, directors, employees, agents or other persons participating in the conduct of the affairs thereof.

Names of persons and names and locations of banks authorized to be exempt from disclosure pursuant to the provisions of subsection (c)(6), (c)(8), and (c)(9)(A)(ii) of the "Government in the Sunshine Act" (5 U.S.C. 552b (c)(6), (c)(8), and (c)(9)(A)(ii)).

Note.—Some matters falling within this category may be placed on the discussion agenda without further public notice if it becomes likely that substantive discussion of those matters will occur at the meeting.

Applications for consent to merge: Citizens Banking Company, Anderson, Indiana, an insured State nonmember bank, for the Corporation's consent to merge, under its charter and title, with Madison County Bank & Trust,

Chesterfield, Indiana, for consent to establish the two offices of Madison County Bank & Trust as branches of Citizens Banking Company, and for the Corporation's consent to the merger of Madison County Bank & Trust, under its charter and title, with MADCO Interim Bank, Anderson, Indiana, a phantom institution.

Reports of the Office of Inspector General:

Audit Report re: Inventory Closing Procedures, Irvine Consolidated Office (Memo dated July 12, 1990)

Audit Report re: First Florida Federal Savings Bank, Gainesville, Florida, Assistance Agreement, Case Number: C-194c (Memo dated June 29, 1990)

Audit Report re: Great American First Savings Bank, San Diego, California, Assistance Agreement, Case Number: C-271c, Memo dated June 8, 1990)

Audit Report re: South Texas Savings Association, Victoria, Texas, Assistance Agreement, Case Number: C-116c (Memo dated June 29, 1990)

Audit Report re: United Savings Bank, San Francisco, California, Assistance Agreement, Case Number: C-272c (Memo dated June 29, 1990)

Audit Report re: First Dakota National Bank, Yankton, South Dakota, Assistance Agreement (Memo dated June 18, 1990)

Audit Report re: Security State Bank, Casey, Iowa, Assistance Agreement (Memo dated June 18, 1990)

Audit Report re: Report on the Limited Review of the Dallas Consolidated Office's Records of Asset Management Contractors and Subcontractors (Memo dated June 15, 1990)

Audit Report re: Audit of Cash Disbursements (Memo dated June 29, 1990)

Audit Report re: Audit of Corporate Cash Receipts (Memo dated June 29, 1990)

Audit Report re: Review of Reports on Waiver of Erroneous Payments (Memo dated June 21, 1990)

Discussion Agenda

Personnel actions regarding appointments, promotions, administrative pay increases,

reassignments, retirements, separation, removals, etc.:

Names of employees authorized to be exempt from disclosure pursuant to the provisions of subsections (c)(2) and (c)(6) of the "Government in the Sunshine Act" (5 U.S.C. 552b (c)(2) and (c)(6)).

Matters relating to the possible closing of certain insured banks:

Names and locations of banks authorized to be exempt from disclosure pursuant to the provisions of subsections (c)(8), (c)(9)(A)(ii), and (c)(9)(B) of the "Government in the Sunshine Act" (5 U.S.C. 552b (c)(8), (c)(9)(A)(ii), and (c)(9)(B)).

The meeting will be held in the Board Room on the sixth floor of the FDIC Building located at 550—17th Street, N.W., Washington, DC.

Requests for further information concerning the meeting may be directed to Mr. Hoyle L. Robinson, Executive Secretary of the Corporation, at (202) 898-3813.

Dated: August 7, 1990.

Federal Deposit Insurance Corporation.

Hoyle L. Robinson,

Executive Secretary.

[FR Doc. 90-18924 Filed 8-8-90; 9:41 am]

BILLING CODE 6714-01-M

FEDERAL RESERVE SYSTEM BOARD OF GOVERNORS

TIME AND DATE: 10:00 a.m., Wednesday, August 15, 1990.

PLACE: Marriner S. Eccles Federal Reserve Building, C Street entrance between 20th and 21st Streets, N.W., Washington, D.C. 20551.

STATUS: Open.

MATTERS TO BE CONSIDERED:

Summary Agenda

Because of its routine nature, no substantive discussion of the following item is anticipated. This matter will be voted on without discussion unless a member of the Board requests that the item be moved to the discussion agenda.

1. Publication for comment of proposed modification to the price structure for the Federal Reserve's Interdistrict Transportation System.

Discussion Agenda

2. Mid-year review of the Board's 1990 budget.

3. Any items carried forward from a previously announced meeting.

Note.—This meeting will be recorded for the benefit of those unable to attend. Cassettes will be available for listening in the Board's Freedom of Information Office, and copies may be ordered for \$5 per cassette by calling (202) 452-3684 or by writing to:

Freedom of Information Office, Board of Governors of the Federal Reserve System, Washington, D.C. 20551

CONTACT PERSON FOR MORE

INFORMATION: Mr. Joseph R. Coyne, Assistant to the Board; (202) 452-3204.

Dated: August 8, 1990.

Jennifer J. Johnson,

Associate Secretary of the Board.

[FR Doc. 90-18947 Filed 8-8-90; 11:41 am]

BILLING CODE 6710-01-M

FEDERAL RESERVE SYSTEM BOARD OF GOVERNORS

TIME AND DATE: Approximately 10:30 a.m., Wednesday, August 15, 1990, following a recess at the conclusion of the open meeting.

PLACE: Marriner S. Eccles Federal Reserve Building, C Street entrance between 20th and 21st Streets, N.W., Washington, D.C. 20551.

STATUS: CLOSED.

MATTERS TO BE CONSIDERED:

1. Personnel actions (appointments, promotions, assignments, reassignments, and salary actions) involving individual Federal Reserve System employees.

2. Any items carried forward from a previously announced meeting.

CONTACT PERSON FOR MORE

INFORMATION: Mr. Joseph R. Coyne, Assistant to the Board; (202) 452-3204. You may call (202) 452-3207, beginning at approximately 5 p.m. two business days before this meeting, for a recorded announcement of bank and bank holding company applications scheduled for the meeting.

Dated: August 8, 1990.

Jennifer J. Johnson,

Associate Secretary of the Board.

[FR Doc. 90-18948 Filed 8-8-90; 11:41 am]

BILLING CODE 6710-01-M

POSTAL SERVICE (BOARD OF GOVERNORS)

Notice of Vote to Close Meeting

At its meeting on August 6, 1990, the Board of Governors of the United States Postal Service voted unanimously to close to public observation its meeting scheduled for September 10, 1990, in St. Louis, Missouri. The members will discuss possible strategies in collective bargaining negotiations.

The meeting is expected to be attended by the following persons: Governors Alvarado, Daniels, del Junco, Griesemer, Hall, Mackie, Nevin, Pace and Setrakian; Postmaster General Frank, Deputy Postmaster General Coughlin, Secretary to the Board Harris, and General Counsel Hughes.

The Board determined that pursuant to section 552b(c)(3) of title 5, United States Code, and section 7.3 (b) and (c) of title 39, Code of Federal Regulations, this portion of the meeting is exempt from the open meeting requirement of the Government in the Sunshine Act [5 U.S.C. 552b(b)] because it is likely to disclose information prepared for use in connection with the negotiation of collective bargaining agreements under chapter 12 of title 39, United States Code, which is specifically exempted from disclosure by section 410(c)(3) of title 39, United States Code.

In accordance with section 552b(f)(1) of title 5, United States Code, and section 7.6(a) of title 39, Code of Federal Regulations, the General Counsel of the United States Postal Service has certified that in his opinion the meeting may properly be closed to public observation pursuant to section 552b(c)(3) of title 5, United States Code; section 410(c)(3) of title 39 United States Code; and section 7.3 (b) and (c) of title 39, Code of Federal Regulations.

Requests for information about the meeting should be addressed to the Secretary of the Board, David F. Harris, at (202) 268-4800.

David F. Harris,

Secretary.

[FR Doc. 90-18974 Filed 8-8-90; 1:54 pm]

BILLING CODE 7710-12-M

Corrections

Federal Register

Vol. 55, No. 155

Friday, August 10, 1990

This section of the FEDERAL REGISTER contains editorial corrections of previously published Presidential, Rule, Proposed Rule, and Notice documents. These corrections are prepared by the Office of the Federal Register. Agency prepared corrections are issued as signed documents and appear in the appropriate document categories elsewhere in the issue.

COMMITTEE FOR PURCHASE FROM THE BLIND AND OTHER SEVERELY HANDICAPPED

Procurement List 1990; Additions

Correction

In notice document 90-18159 beginning on page 31620 in the issue of Friday, August 3, 1990, make the following correction:

On page 31620, in the second column, the **COMMENTS** date should read "September 4, 1990."

BILLING CODE 1505-01-D

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 261, 264, 265, 266, 271, and 302

[SWH-FRL-3816-1, EPA/OSW-FR-90-FFF]
RIN 2050-AA78

Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristic Revisions

Correction

In rule document 90-18073 beginning on page 31387 in the issue of Thursday, August 2, 1990, make the following corrections:

1. On page 31387, in the third column the docket line was incorrect and should read as set forth above.

2. On the same page, in the third column, under **DATES**, in the last line, "October 31, 1990" should read "November 2, 1990".

3. On page 31388, in the third column, in the note, in the second and third lines, the bracketed phrase should be removed and the date "November 2, 1990" should be inserted.

4. On page 31390, in the third column at the end of the document, the file line was omitted and should read:

[FR Doc. 90-18073 Filed 8-1-90; 8:45am]

BILLING CODE 6560-50-M

BILLING CODE 1505-01-D

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Social Security Administration

20 CFR Part 416

RIN 0960-AC48

Subpart L; Resources and Exclusions; Exclusion From Resources of Funds Set Aside for Burial and Burial Spaces

Correction

In rule document 90-16145 beginning on page 28373 in the issue of Wednesday, July 11, 1990, make the following corrections:

1. On page 28373, in the second column, in the first paragraph of the **SUPPLEMENTARY INFORMATION**, in the third line from the end, "to" should read "for".

2. On page 28374, in the first column, in the eighth line from the top, "10" should read "100".

3. On the same page, in the second column, in the first full paragraph, in the sixth line, "and" should read "through".

BILLING CODE 1505-01-D

DEPARTMENT OF TRANSPORTATION

Coast Guard

33 CFR Parts 175 and 181

[CGD 81-023]

RIN 2115-AA58

Equipment Requirements for Recreational Boats; Personal Flotation Devices

Correction

In rule document 90-17731 beginning on page 32032 in the issue of Monday, August 6, 1990, make the following corrections:

§ 175.17 [Corrected]

1. On page 32034, in the second column, in § 175.17, in the first line of the introductory text, "Type PFD" should read "Type V PFD".

PART 181—MANUFACTURER REQUIREMENTS

2. On the same page, at the bottom of the same column, the heading for part 181 should read as set forth above.

BILLING CODE 1505-01-D

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Registered Federal Reporter

Friday
August 10, 1990

Part II

Department of Labor

Occupational Safety and Health
Administration

29 CFR Part 1910

Occupational Exposure to 1,3-Butadiene;
Proposed Rule and Notice of Hearing

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

29 CFR Part 1910

[Docket No. H-041]

RIN: 1218-AA83

Occupational Exposure to 1,3 Butadiene

AGENCY: Occupational Safety and Health Administration (OSHA), Department of Labor.

ACTION: Proposed rule and notice of hearing.

SUMMARY: The Occupational Safety and Health Administration (OSHA) is proposing to amend its existing occupational standard that regulates employee exposure to 1,3-Butadiene (BD). The basis for this action is a determination by the Assistant Secretary, based on animal and human data, that OSHA's current permissible exposure limit (PEL) which permits employees to be exposed to BD in concentrations up to 1,000 parts BD per million parts of air (1,000 ppm) as an eight-hour time-weighted average (TWA) is inadequate for employee health protection. OSHA proposes to reduce the PEL for BD to an 8-hour TWA of 2 ppm and a short term exposure limit (STEL) of 10 ppm for 15 minutes to protect the health of workers exposed to BD. An "action level" of 1 ppm as an 8-hour TWA is included in the proposal as a mechanism for exempting an employer from some administrative burdens, such as employee exposure monitoring and medical surveillance, in instances where the employer can demonstrate that the employee's exposures are consistently at very low levels. In order to achieve this reduced PEL, OSHA proposes a number of requirements including certain provisions for exposure control, such as engineering controls, work practices and personal protective equipment, measurement of employee exposures, training, medical surveillance, hazard communication, regulated areas, emergency procedures and recordkeeping.

This proposed standard would apply to all employment in all industries covered by the Act, namely general industry, construction, and maritime.

DATES: Comments concerning the proposed standard must be postmarked on or before October 19, 1990.

Notices of Intention to Appear at the informal rulemaking hearings must be postmarked more than ten (10) minutes for their presentations at the hearings

and parties who plan to submit documentary evidence at the hearing must submit the full text of their testimony and all documentary evidence postmarked no later than October 19, 1990.

All informal public rulemaking hearings will begin at 10 a.m. each day. Two informal public rulemaking hearings are scheduled to begin on the following dates: Washington, DC, December 11, 1990; and New Orleans, Louisiana, January 8, 1991.

ADDRESSES: Comments are to be submitted in quadruplicate to the Docket Officer, Docket No. H-041 Room N-2634, United States Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210, Telephone (202) 523-7894. Comments limited to 10 pages or less in length also may be transmitted by facsimile to (202) 523-5046 or 8-523-5046 (for FTS), provided the original and 3 copies of the comment are sent to Docket Officer thereafter.

Notices of Intention to Appear at the informal rulemaking hearings and testimonies and documentary evidence to be presented at the hearings are to be sent to Mr. Tom Hall, OSHA Division of Consumer Affairs, Docket No. H-041 Room N-3649, United States Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210, Telephone: (202) 523-8615.

The locations of the informal public hearings are as follows: The Washington, DC, hearings will be held in the Auditorium, Frances Perkins Building, 200 Constitution Avenue, NW., Washington, DC 20210. The New Orleans, LA hearings will be held in the Le Pavillon Hotel (Denechaud Room), 633 Poydras Street, New Orleans, LA 70140, Telephone no. 504-581-3111.

FOR FURTHER INFORMATION CONTACT: Mr. James F. Foster, OSHA Office of Public Affairs, United States Department of Labor, Room N-3641, 200 Constitution Avenue, NW., Washington, DC 20210, Telephone (202) 523-8151.

Information Collection Requirements: 5 CFR part 1320 sets forth procedures for agencies to follow in obtaining OMB clearance for information collection requirements under the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 et seq. This proposed BD standard requires the employer to allow OSHA access to records. In accordance with the provisions of the Paperwork Reduction Act and the regulations issued pursuant thereto, OSHA certifies that it will submit the information collection requirements for this proposal to OMB for review under section 3504(h) of that Act.

Public reporting burden for this collection of information is estimated to average five minutes per response. Send comments regarding this burden estimate or any other aspect of this collection of information, to the Office of Information Management, Department of Labor, Room N-1301, 200 Constitution Avenue, NW., Washington, DC 20210; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

Federalism: This proposed standard has been reviewed in accordance with Executive Order 12612 (52 FR 41685, October 30, 1987), regarding Federalism. This Order requires that agencies, to the extent possible, refrain from limiting State policy options, consult with States before taking any actions that would restrict State policy options, and take such actions only when there is clear constitutional authority and the presence of a problem of national scope. The Order provides for preemption of State law only if there is a clear Congressional intent for the agency to do so. Any such preemption is to be limited to the extent possible.

Section 18 of the Occupational Safety and Health Act (OSH Act) expresses Congress' clear intent to preempt State laws relating to issues with respect to which Federal OSHA has promulgated occupational safety or health standards. Under the OSH Act a State can avoid preemption only if it submits, and obtains Federal approval of, a plan for the development of such standards and their enforcement. Occupational safety and health standards developed by such Plan-States must, among other things be at least as effective in providing safe and healthful employment and places of employment as the Federal standards.

The Federally proposed BD standard is drafted so that employees in every State would be protected by general, performance oriented standards. To the extent that there are State or regional peculiarities caused by the terrain, the climate, or other factors, State with occupational safety and health plans approved under section 18 of the OSH Act would be able to develop their own State standards to deal with any special problems. Moreover, the performance nature of this proposed standard, of and by itself, allows for flexibility by all States and employers to provide as much safety as possible using varying methods consonant with conditions in each State.

In short, there is a clear national problem related to occupational safety and health for employment exposed to BD. While the individual States, if all

acted, might be able collectively to deal with the health and safety problems involved, most have not elected to do so in the seventeen years since the enactment of the OSH Act. States which have elected to participate under section 18 of the OSH Act would not be preempted by this proposed regulation and would be able to deal with special, local conditions within the framework provided by this performance oriented standards while ensuring that their standard are at least as effective as the Federal standard. State comments are invited on this proposal and will be fully considered before a final rule is promulgated.

State Plans. The 25 States with their own OSHA-approved occupational safety and health plans must adopt a comparable standard within six months of the publication date of a final standard. These States include: Alaska, Arizona, California, Connecticut, (for State and local government employees only), Hawaii, Indiana, Iowa, Kentucky, Maryland, Michigan, Minnesota, Nevada, New Mexico, New York, (for State and local government employees only), North Carolina, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Vermont, Virginia, Virgin Islands, Washington, Wyoming. Until such time as a State standard is promulgated, Federal OSHA will provide interim enforcement assistance, as appropriate.

SUPPLEMENTARY INFORMATION:

I. Table of Contents

The preamble to the proposed standard on occupational exposure to BD discusses events leading to the proposal, physical and chemical properties of BD, manufacture and use of BD, health effects of exposure, degree and significance of the risk presented, an analysis of the technological and economic feasibility, regulatory impact and regulatory flexibility analysis, and the rationale behind the specific provisions set forth in the proposed standard. The discussion follows this outline:

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 - Appendix A to § 1910.1051: Substance Safety Data Sheet for 1,3-Butadiene
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 - Appendix D to § 1910.1051: Sampling and Analytical Method for 1,3-Butadiene
 - Appendix E to § 1910.1051: Qualitative and Quantitative Fit Testing Procedures for Respirators

References to the rulemaking record are in the text of the preamble. References are given as "Ex." followed by a number to designate the reference in the docket. For example, "Ex. 1" means exhibit 1 in Docket H-041. This document is a request for information by OSHA and the Environmental Protection Agency that was published in the *Federal Register*, January 5, 1984 (49 FR 844).

II. Pertinent Legal Authority

This proposed standard and issuance of a final standard is authorized by sections 6(b), 8(c), and 8(g)(2) of the Occupational Safety and Health Act of 1970 (the Act), 29 U.S.C. 655(b), 657(c) and 657(g)(2). Section 6(b)(5) governs the issuance of occupational safety and

health standards dealing with toxic materials or harmful physical agents. It states:

The Secretary, in promulgating standards dealing with toxic materials or harmful physical agents under this subsection, shall set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the hazard dealt with by such standard for the period of his working life. Development of standards under this subsection shall be based upon research, demonstrations, experiments, and other information as may be appropriate. In addition to the attainment of the highest degree of health and safety protection for the employee, other considerations shall be the latest available scientific data in the field, the feasibility of the standards, and experience gained under this and other health and safety laws. Whenever practicable, the standard promulgated shall be expressed in terms of objective criteria and of the performance desired.

Section 3(8) defines an occupational safety and health standard as "a standard which requires conditions, or the adoption or use of one or more practices, means, methods, operations, or processes, reasonably necessary or appropriate to provide safe or healthful employment and places of employment." The Supreme Court has held under the Act that the Secretary, before issuing any new standard, must determine that it is reasonably necessary and appropriate to remedy a significant risk of material health impairment, *Industrial Union Department v. American Petroleum Institute*, 488 U.S. 607 (1980). The Court stated that " * * * before he can promulgate any permanent health or safety standard, the Secretary is required to make a threshold finding that a place of employment is unsafe—in the sense that significant risks are present and can be eliminated or lessened by a change in practices" (488 U.S. at 642). The Court also stated "that the Act does limit the Secretary's power to require the elimination of significant risks" (488 U.S. at 644, n. 49).

The Court indicated however, that the significant risk determination is "not a mathematical straitjacket." The Court stated that "OSHA is not required to support its finding that a significant risk exists with anything approaching scientific certainty." The Court ruled that "a reviewing court (is) to give OSHA some leeway where its findings must be made on the frontiers of scientific knowledge," (and that) "the Agency is free to use conservative assumptions in interpreting the data with respect to carcinogens, risking

error on the side of overprotection rather than underprotection" (488 U.S. at 655, 656). The Court also stated that "while the Agency must support its finding that a certain level of risk exists with substantial evidence, we recognize that its determination that a particular level of risk is 'significant' will be based largely on policy considerations". (488 U.S. at 655, 656 n. 62).

After OSHA has determined that a significant risk exists and that such a risk can be reduced or eliminated by the proposed standard, it must set a standard " * * * which most adequately assures, to the extent feasible on the basis of the best available evidence, that no employees will suffer material impairment of health * * * " Section 6(b)(5) of the Act. The Supreme Court has interpreted this section to mean that OSHA must enact the most protective standard possible to eliminate a significant risk of material health impairment, subject to the constraints of technological and economic feasibility. *American Textile Manufacturers Institute, Inc. v. Donovan*. 452 U.S. 490 (1981). The Court held that "cost-benefit analysis is not required by the statute because feasibility analysis is" (452 U.S. at 509). The Court stated that the Agency could use cost effectiveness analysis and choose the least costly of two equally effective standards (452 U.S., 531, n. 32).

Section 8(c)(3) gives the Secretary authority to require employers to "maintain accurate records of employee exposures to potentially toxic materials or harmful physical agents which are required to be monitored or measured under section 6." Section 8(g)(2) gives the Secretary authority to "prescribe such rules and regulations as he may deem necessary to carry out [her] responsibilities under this Act."

In addition, the Secretary's responsibilities under the Act are amplified by its enumerated purposes which include:

Encouraging employers and employees in their efforts to reduce the number of occupational safety and health hazards at their places of employment and stimulating employers and employees to institute new and to perfect existing programs for providing safe and healthful working conditions (29 U.S.C. 651(b)(1));

Authorizing the Secretary of Labor to set mandatory occupational safety and health standards applicable to business affecting interstate commerce, and by creating an Occupational Safety and Health Review Commission for carrying out adjudicatory functions under the Act: (29 U.S.C. 651(b)(3));

Building upon advances already made through employer and employee initiative for providing safe and healthful working conditions (29 U.S.C. 651(b)(4));

Providing for the development and promulgation of occupational safety and health standards (29 U.S.C. 652(b)(9)) and providing for appropriate reporting procedures which will help achieve the objectives of this Act and accurately describe the nature of the occupational safety and health problem (29 U.S.C. 651(b)(12)).

Exploring ways to discover latent diseases, establishing causal connections between diseases and work in environmental conditions (29 U.S.C. 651(b)(6));

Encouraging joint labor-management efforts to reduce injuries and diseases arising out of employment (29 U.S.C. 651(b)(13)); and

Developing innovative methods, techniques, and approaches for dealing with occupational safety and health problems (29 U.S.C. 651(b)(5)).

Because the BD proposed standard is reasonably related to these statutory goals, and the Agency's judgment is that the evidence satisfies the statutory requirements, and because the proposed standard is feasible and substantially reduces a significant risk of cancer and other adverse health effects, the Secretary preliminarily finds that the proposed standard is necessary and appropriate to carry out her responsibilities under the Act.

III. Events Leading to the Proposed Standard

The present OSHA standard for BD requires employers to assure that employee exposure does not exceed 1,000 ppm determined as an 8-hour TWA (29 CFR 1910.1000, Table Z-1). This standard was adopted by OSHA in 1971 pursuant to section 6(a) of the OSH Act, 29 U.S.C. 655 from an existing Walsh-Healy Federal Standard. The source of this Walsh-Healy Standard was the Threshold Limit Value (TLV) for BD developed in 1968 by the American Conference of Governmental Industrial Hygienists (ACGIH). This TLV was adopted by the ACGIH to prevent irritation and narcosis.

In 1983, the National Toxicology Program (NTP) released the results of an animal study indicating that BD causes cancer in rodents (Ex. 20). Based on the strength of the results of this animal study, ACGIH in 1983 classified BD as an animal carcinogen and in 1984 recommended a new TLV of 10 ppm (Ex. 2-4). Based on the same evidence, on February 9, 1984, the National Institute for Occupational Safety and Health

(NIOSH) published a Current Intelligence Bulletin (CIB) recommending that BD be regarded as a potential occupational carcinogen, teratogen and a possible reproductive hazard (Ex. 23-17). On January 5, 1984, OSHA published a Request for Information (RFI) jointly with the Environmental Protection Agency (EPA) (49 FR 844). EPA also announced the initiation of a 180 day review under the authority of section 4(f) of the Toxic Substance Control Act (TSCA) (49 FR 845) to determine "whether to initiate appropriate action to prevent or reduce the risk from the chemical or to find that the risk is not unreasonable". Comments were to be submitted to OSHA by March 5, 1984. On April 4, 1984, OSHA extended the comment period until further notice (49 FR 13389).

Petitions for an Emergency Temporary Standard (ETS) of 1 ppm or less for workers' exposure to BD (Ex. 6-4) were submitted to OSHA on January 23, 1984, by the United Rubber, Cork, Linoleum and Plastic Workers of America (URW), the Oil, Chemical and Atomic Workers (OCAW), the International Chemical Workers Union (ICWU), and the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO). On March 7, 1984, OSHA denied the petitions on the ground that the Agency was still evaluating the health data to determine whether regulatory action was appropriate.

Based on its 180-day review of BD, EPA published on May 15, 1984, an Advance Notice of Proposed Rulemaking (ANPR) (49 FR 20524) to announce the initiation of a regulatory action by the EPA to determine and implement the most effective means of controlling exposures to the chemical BD under the TSCA. EPA was working with OSHA, because available evidence indicates that exposure to BD occurs primarily within the workplace.

Information received in response to this ANPR was used by EPA to develop risk assessments. Subsequently, EPA identified BD as a probable human carcinogen (Group B2) according to EPA's classification of carcinogens, and concluded that current exposures during the manufacturing of BD and its processing into polymers presented an unreasonable risk of injury to human health (Ex. 17-4). Additionally, EPA determined that the risks associated with exposure to BD may be reduced to a sufficient extent by action taken under the OSH Act. Following these findings, EPA, in accordance with section 9(a) of TSCA, on October 10, 1985 (50 FR 41393), referred BD to OSHA to give this Agency an opportunity to regulate the

chemical under the OSH Act. EPA requested that OSHA determine whether the risks described in the EPA report may be prevented or reduced to a sufficient extent by action taken under the OSH Act. EPA requested that if such a determination is made, OSHA issue an order declaring whether the manufacture and use of BD described in the EPA report present the risk therein described. EPA requested OSHA to respond within 180 days, by April 8, 1986 (50 FR 41393).

On December 27, 1985, OSHA published a notice (50 FR 52952) soliciting public comments on EPA's referral report. Based on all the available information, OSHA, on April 11, 1986, responded to the EPA referral report by making a preliminary determination (50 FR 12526) that a revised OSHA standard limiting occupational exposure to BD could prevent or reduce the risk of exposure to a sufficient extent and that such risks had been accurately described by EPA in the report. On October 1, 1986, OSHA published an ANPR (51 FR 35003) to initiate a rulemaking within the meaning of section 9(a) of TSCA. The Agency requested that comments be submitted by December 30, 1986. Twenty-four comments, some of them containing new information, were received in response to the ANPR (Ex. 28-1 to 28-24). Six additional comments were received after the deadline (Ex. 29-1 to 29-6).

OSHA has reviewed the available data and conducted risk assessment, regulatory impact and flexibility analyses. These analyses demonstrate that the proposed standard is technologically and economically feasible and substantially reduces the significant risk of cancers and other adverse health effects such as, but not limited to, reproductive toxicity and anemia.

IV. Chemical Identification, Production and Use

A. Monomer

The chemical 1,3-Butadiene (BD) (Chemical Abstracts Registry Number 106-99-0) is a colorless, noncorrosive, flammable gas with a mild aromatic odor at standard ambient temperature and pressure. It has a chemical formula of C_4H_6 , a molecular weight of 54.1, and a boiling point of $-4.7^\circ C$ at 760 mm Hg, a lower explosive limit of 2%, and an upper explosive limit of 11.5%. Its vapor density is almost twice that of air. It is slightly soluble in water, somewhat soluble in methanol and ethanol, and readily soluble in less polar organic solvents such as hexane, benzene, and toluene (Ex. 17-17). It is highly reactive,

dimerizes to 4-vinylcyclohexene, and polymerizes easily. Because of its low odor threshold, high flammability and explosiveness, BD has been handled with extreme care in the industry.

In the United States BD has been produced commercially by three processes: Catalytic dehydrogenation of n-butane and n-butene, oxidative dehydrogenation of n-butene, and recovery from the C_4 co-product (by product) stream from the steam cracking process used to manufacture ethylene, which is the major product of the petrochemical industry. For economic reasons, almost all BD currently made in the U.S. is produced by the ethylene co-product process.

In the steam cracking process for ethylene, a hydrocarbon feedstock is diluted with steam then heated rapidly to a high temperature by passing it through tubes in a furnace. The output stream, containing a broad mixture of hydrocarbons from the pyrolysis reactions in the cracking tubes plus unreacted components of feedstock, is cooled and then processed through a series of distillation and other separation operations in which the various products of the cracking operation are separated for disposal, recycling or recovery.

The cracking process produces from around 0.02 to 0.3 pounds of BD per pound of ethylene, dependent upon the composition of the feedstock. BD is recovered from the C_4 stream by the separation operations. The C_4 stream contains from 30 to 50% BD plus butane, butenes and small fractions of other hydrocarbons. This crude BD stream from the ethylene unit may be refined in a unit on site, or transferred to another location, owned by the same or a different company, to produce purified BD, called monomer plant.

Regardless of the source of the crude BD-ethylene co-product, dehydrogenation, or blending of C_4 streams from other sources, the processes used by different companies to refine BD for subsequent use in polymer production are similar. Extractive distillation is used to effect the basic separation of BD from butanes and butenes and fractional distillation operations are used to accomplish other related separations. A typical monomer plant process is described in the following paragraph.

C_3 and C_4 acetylene derivatives, present in the C_4 co-product stream, are converted to olefins by passing the stream through a hydrogenation reactor. The stream is then fed to an extractive distillation column to separate the BD from butanes and butenes. Several

different solvents have been employed for this operation, including n-methylpyrrolidone, dimethylformamide, furfural, acetonitrile, dimethylacetamide, and cuprous ammonium acetate solution. The BD, extracted by the solvent, is stripped from it in the solvent recovery column, then fed to another fractionation column, the methylacetylene column, to have residual acetylene stripped out. The bottom stream from the methylacetylene column, containing the BD, is fed to the BD rerun column, from which the purified BD product is taken off overhead. The solvent, recovered in the solvent recovery column, is recycled to the extractive distillation column with part of it distilled to keep down the level of polymer (Ex. 17-17).

A stabilizer is added to the monomer to inhibit formation of polymer during storage. It is stored as a liquid under pressure, sometimes refrigerated to reduce the pressure, generally in a tank farm in diked spheres. It is shipped to polymer manufacturers and other users by pipeline, barge, tankcar, or tanktruck.

BD is a major commodity product of the petrochemical industry. Total U.S. production of BD in 1987 was 3.0 billion pounds and ranked 35th in chemicals manufactured in the U.S. Although BD is a toxic flammable gas, its simple chemical structure with low molecular weight and high chemical reactivity make it a useful building block for synthesizing other products. In "1,3-Butadiene Use and Substitutes Analysis" (Ex. 17-15), EPA identified 140 major, minor, and potential uses of BD in the chemical industry.

Over 60% of the BD consumed in the United States is used in the manufacture of rubber, about 12% in making adiponitrile which in turn is used to make hexamethylenediamine (HMDA), approximately 8% in making styrene-butadiene copolymer latexes, approximately 7% in producing polychloroprene, and about 6% in producing acrylonitrile-butadiene-styrene (ABS) resins. Lesser amounts are consumed in the production of rocket propellants, specialty copolymer resins and latexes for paint, coating and adhesive applications, and hydrogenated butadiene-styrene polymers used as lubricating oil additives. Some nonpolymer applications include the manufacture of the agricultural fungicides, Captan and Captofol, the industrial solvent sulfolane, and anthraquinone dyes.

B. Polymer

BD based synthetic elastomers are manufactured by polymerizing BD by

itself, by polymerizing BD with other monomers to produce copolymers, and by producing mixtures of these polymers. The largest-volume product is the copolymer of styrene and BD, followed in volume by polybutadiene, polychloroprene, and nitrile rubber. Polybutadiene is the polymer of BD monomer by itself. Polychloroprene is made by polymerizing chloroprene, produced by chlorination of BD. Nitrile rubbers are copolymers of acrylonitrile and BD.

Four general types of processes are used in polymerizing BD and its copolymers: Emulsion, suspension, solution and bulk polymerization. In emulsion and suspension polymerization, the monomers and the many chemicals used to control the reaction are finely dispersed or dissolved in water. In solution polymerization, the monomers are dissolved in an organic solvent such as hexane, pentane, toluene and others. In bulk polymerization, the monomer itself serves as solvent for the polymer. The polymer product, from which end-use products are manufactured, is produced in the form of polymer crumb (solid particles), latex (a milky suspension in water), or cement (a solution).

Emulsion polymerization is the principal process used to make synthetic rubber. A process for the manufacture of styrene-butadiene crumb is typical of emulsion processes. Styrene and BD are piped to the process area from the storage area. The BD is passed through a caustic soda scrubber to remove the inhibitors which were added to prevent premature polymerization. The fresh BD monomer streams are mixed with styrene, aqueous emulsifying agents, activator, catalyst, and modifier, and then fed to the first of a train of reactors. The reaction proceeds stepwise in the series of reactors to around 60% conversion of monomer to polymer. In the cold process, the reactants are chilled and the reactor temperature is maintained at 4 °C to 7 °C (40 °F to 45 °F) and pressure at 0 to 15 psig; in the hot rubber process, temperature and pressure are around 50 °C (122 °F) and 40 to 60 psig, respectively.

The latex from the reactor train is flashed to evaporate unreacted BD which is compressed, condensed and recycled. Uncondensed vapors are absorbed in a kerosene absorber before venting and the absorbed BD is steam stripped or recovered from the kerosene by some other operation. The latex stream is passed through a steam stripper, operated under vacuum, to remove and recover unreacted styrene. The styrene and water in the

condensate are separated by decanting. The styrene phase is recycled to the process. Noncondensibles from the stripping column contain some BD and are directed through the BD recovery operations.

Stripped latex, to which an antioxidant has been added, is pumped to coagulation vessels where dilute sulfuric acid and sodium chloride solution are added. The acid and brine mixture breaks the emulsion, releasing the polymer in the form of crumb. Sometimes carbon black and oil are added during the coagulation step since a more intimate dispersion is obtained than by mixing later on.

The crumb and water slurry from the coagulation operation is screened to separate the crumb. The wet crumb is pressed in rotary presses to squeeze out most of the entrained water then dried with hot air on continuous dry belt dryers. The dried product is baled and weighed for shipment.

Production of styrene-butadiene latex by the emulsion polymerization process is similar to that for crumb but is usually carried out on a smaller scale with fewer reactors. For some but not all products, the reaction is run to near completion, monomer removal is simpler and recovery may not be practiced.

Polybutadiene rubber is usually produced by solution polymerization. Inhibitor is removed from the monomer by caustic scrubbing. Both monomer and solvent are dried by fractional distillation, mixed in the desired ratio and dried in a desiccant column. Polymerization is conducted in a series of reactors using initiators and catalysts and is terminated with a shortstop solution. The solution, called rubber cement, is pumped to storage tanks for blending. Crumb is precipitated by pumping the solution into hot water under violent agitation. Solvent and monomer are recovered by stripping and distillation similar to those previously described. The crumb is screened, de-watered, dried and baled.

Polychloroprene (neoprene) elastomers are manufactured by polymerizing chloroprene in an emulsion polymerization process similar to that used for making styrene-butadiene rubber. The monomer, chloroprene (2-chloro-BD), is made by chlorination of BD to make 3,4-dichlorobutene, and dehydrochlorination of the latter to produce polychloroprene.

Nitrile rubbers, copolymers of acrylonitrile and BD, are produced by emulsion polymerization similar to that used to make styrene-butadiene rubber (SBR).

Substantial amounts of BD are used in the production of two other large volume polymers: Nylon resins and ABS resin. DuPont manufactures adiponitrile from BD and uses the product to make hexamethylenediamine which is polymerized in making Nylon resins and fibers, including Nylon 6,6. Acrylonitrile, BD and styrene are the monomers used to make ABS resin which is a major thermoplastic resin. Chemically complex emulsion, suspension and bulk polymerization processes are used by different producers to make ABS polymer. Excess acrylonitrile and styrene monomers are generally disposed of rather than recovered with the exception of BD recovery in some cases.

V. Health Effects

A. Introduction

Until the recent rodent studies conducted by the National Toxicology Program (NTP) and by Hazelton Laboratories England for the International Institute of Synthetic Rubber Producers (IISRP), little was known about the recently discovered adverse effects potentially associated with chronic exposure to BD. Health-based standards recommendations were based on prevention of irritation and narcosis.

The rodent studies now indicate that BD is an animal carcinogen, and complementary studies of metabolic products and genotoxicity support the bioassay findings. There is also new evidence that BD may affect the germ cell as well as the somatic cell, raising concerns regarding reproductive and developmental toxicity. Finally, some epidemiologic studies of workers exposed to BD in the synthetic rubber industry show an excess cancer mortality from leukemia/lymphoma, raising further concerns about BD as a potential occupational carcinogen.

B. Carcinogenicity

1. Animal Studies

(i) The NTP Mouse Study. An inhalation bioassay of BD was conducted for the National Toxicology Program (NTP) of the U.S. Department of Health and Human Services by Battelle Pacific Northwest Laboratories (Ex. 23-1). The exposure groups consisted of fifty male and fifty female B6C3F₁ mice. The animals were exposed for six hours per day, five days per week to nominal concentrations of 0, 625, and 1250 ppm of BD. Actual concentrations averaged 627 and 1236 ppm for the exposed groups over the course of the experiment. Attempts were made to

limit the animals' exposure to the dimer 4-vinyl-1-cyclohexene. Only three cylinders of BD used during the course of the study had dimer concentrations greater than 100 ppm, and these were used only because no substitutes were available.

The study was originally designed to run for 104 weeks but was terminated at week 60 for the males and week 61 for the females because of high mortality from malignant tumors in the exposed mice. Survival among exposed mice was significantly reduced compared to controls (males: $p < .001$; females:

$p < .002$). Among males, survival at termination of the study was 98% for controls, 22% for the low dose group, and 14% for the high dose group. Among females, survival at termination of the study was 92% for controls, 28% for the low dose group, and 60% for the high dose group.

A complete necropsy and histopathological exam was conducted on all animals, including those found dead, unless the animal tissue was excessively autolyzed or cannibalized. Elevated tumor incidence was observed in exposed mice at multiple sites. Table

1 contains a summary of the incidence of primary tumors which occurred at a statistically significantly elevated rate in either of the exposed groups. For the tumor sites presented in Table 1, all incidences except papilloma or carcinoma incidence in the forestomach of male mice showed a significant dose-related trend. Overall tumor incidence among male mice was 20% in the controls, 88% in the low dose group and 80% in the high dose group and among females was 12% in the controls, 82% in the low dose group, and 94% in the high dose group.

TABLE 1.—SUMMARY INCIDENCE OF PRIMARY TUMORS IN B6C3F₁ MICE INDUCED BY INHALATION OF 1,3-BUTADIENE

	Controls	625 ppm	1250 ppm
Males:			
Lung: Alveolar/Bronchiolar.....	2/50(4%)	14/49(29%)	15/49(31%)
Adenoma or Carcinoma.....	$p < .001^b$	$p < .001^c$	$p < .001^c$
Hematopoietic System.....	0/50(0%)	23/50(46%)	29/50(58%)
Malignant Lymphoma.....	$p < .001$	$p < .001$	$p < .001$
Heart: Hemangiosarcoma.....	0/50(0%)	16/49(33%)	7/49(14%)
	$p = .032$	$p < .001$	$p = .006$
Forestomach.....	0/49(0%)	7/40(18%)	1/44(2%)
Papilloma or Carcinoma.....	$p = .363$	$p = .003$	$p = .473$
Females:			
Lung: Alveolar/Bronchiolar.....	3/49(6%)	12/48(25%)	23/49(47%)
Adenoma or Carcinoma.....	$p < .001$	$p = .01$	$p < .001$
Hematopoietic System.....	1/50(2%)	10/49(20%)	10/49(20%)
Malignant Lymphoma.....	$p = .006$	$p = .003$	$p = .003$
Heart: Hemangiosarcoma.....	0/50(0%)	11/48(23%)	18/49(37%)
	$p < .001$	$p < .001$	$p < .001$
Liver: Hepatocellular.....	0/50(0%)	2/47(4%)	5/49(10%)
Adenoma or Carcinoma.....	$p = .016$	$p = .232$	$p = .027$
Forestomach.....	0/49(0%)	5/42(12%)	10/49(20%)
Papilloma or Carcinoma.....	$p < .001$	$p = .018$	$p < .001$
Mammary Gland.....	0/50(0%)	2/49(4%)	6/49(12%)
Acinar Cell Carcinoma.....	$p = .007$	$p = .242$	$p = .012$
Ovary: Granulosa Cell.....	0/49(0%)	6/45(13%)	13/48(27%)
Carcinoma or Tumor.....	$p < .001$	$p = .010$	$p < .001$

* Numerator is number of animals with tumors at the site; denominator is number of animals examined at the site.

^b The p-value given below the incidence for controls is the p-value associated with the Cochran-Armitage Trend Test.

^c The p-value given below the incidence for the exposed groups is the p-value associated with the Fisher Exact Test of exposed versus controls.

The most striking of the tumors observed in the mice were the lymphomas and the heart hemangiosarcomas. Malignant lymphoma was the most common tumor type observed in exposed male mice, and these neoplasms were considered to be the major cause of early deaths in both male and female BD-exposed mice. The lymphomas appeared to originate in the thymus of most animals, but NTP noted that their precise origin and pathogenesis were difficult to trace because of their advanced degree of development at the time of necropsy. The lymphomas occurred as early as week 20 in a high dose female, but most deaths attributed to lymphoma occurred between weeks 40 and 45.

The hemangiosarcomas of the heart were of particular interest because these tumors, which occurred with high frequency, are extremely rare in this type of mice. NTP reported that in 2-year

studies conducted by the NTP Carcinogenesis Program, only one such tumor has been observed in 2372 untreated male mice of this species and only one such tumor has been observed in 2443 untreated female mice of this species. Heart lesions observed in exposed mice displayed a broad spectrum of changes; changes varied from the presence of more prominent endothelial cells (diagnosed as atypical hyperplasia) to frank tumor masses.

In addition to the malignant lymphomas and the heart hemangiosarcomas, a statistically significant increase in tumor incidence occurred in exposed mice in the lung and forestomach of both males and females, and in the liver, mammary gland, and ovaries of females. Elevated incidences of neoplasms were observed in exposed mice in the preputial gland, brain, and Zymbal gland, but none of these were statistically significant. NTP

noted that squamous cell carcinomas of the preputial gland, which occurred in three low dose males and one high dose male, were uncommon in this type of mouse at little more than a year old. Brain neoplasms have been observed in none of 2,343 untreated male B6C3F₁ mice in 2-year studies in the NTP Program, but brain gliomas were observed in two low dose males and one high dose male in this study. Carcinomas of the Zymbal gland, occurring in two high dose males and one high dose female, have been observed in only one of 2343 untreated B6C3F₁ male mice and none of 2386 B6C3F₁ female mice in the NTP Program. Adenosquamous carcinomas of the mammary gland were observed in four low dose females.

Based on the evidence from its inhalation bioassay, NTP concluded there was "clear evidence of carcinogenicity" in male and female

B6C3F₁ mice. This category, based on the strength of the experimental evidence, is the highest classification in NTP's system of categorizing evidence of carcinogenicity.

As part of their normal audit procedures, NTP performed an exhaustive audit of the BD bioassay. Initial audit results raised serious concerns about the quality of the study and the interpretation of the study results (Ex. 17-23). These concerns were ultimately resolved after discussions with Battelle Pacific Northwest Laboratories (Ex. 17-24). NTP concluded that the study's deficiencies were either purely administrative in nature, such that they had no effect on the study's results or the interpretation of those results, or were of such small magnitude that they did not affect the overall outcome of the study or the conclusion that BD induced a strong dose-related carcinogenic response in mice (Ex. 22-3, Attachment 4).

In response to concerns raised by the NTP audit, the Chemical Manufacturers Association (CMA) conducted its own audit of the NTP bioassay (Ex. 17-25). In that audit, CMA identified several deficiencies in the conduct of the study. These included inaccuracies in exposure concentration measurements; discrepancies in slide-block comparisons; deviations from study protocol by the testing laboratory personnel; and possibilities of animal mix-ups between exposure groups in the BD study and between study groups from other bioassays running concurrently at Battelle. The audit led CMA to conclude that the BD inhalation study "as reported cannot be certified as a true reflection of the raw data, and cannot be accepted as being in compliance with either the Good Laboratory Practices (GLP) Regulations that were in effect at the time of the study's conduct (Food and Drug Administration, 21 CFR part 58) or the GLP Regulations promulgated by the Environmental Protection Agency (Federal Register, November 29, 1983, part 792)."

NTP addressed the issues raised by the CMA audit in a memorandum to the record dated October 28, 1985 (Ex. 22-3). After responding to each of CMA's specific concerns, NTP concluded:

It is difficult to understand (CMA's) conclusion regarding certification of the study report. The important question, is the study valid based on a review of the study records and data, seems to be sidestepped by the CMA conclusion which focuses instead on compliance with GLP regulations. It is clear that the NTP and CMA differ in their respective evaluations of the seriousness of their separate audit findings. However, it

must be kept in mind that NTP's final conclusion, as stated in Appendix H of its Technical report on 1,3-Butadiene, that is, "the data examined in this audit are considered adequate to meet the objectives of these studies," is based on an in-depth review of all of the available and pertinent records and data in light of the strong biological response obtained by the study. * * * Thus, while the NTP study was interpreted on the basis of its own raw data and study records, whatever flaws may have existed did not prevent the correct interpretation of the results.

In its ANPR for BD (51 FR 35003, October 1, 1986), OSHA described a number of the deviations from Good Laboratory Practices that were identified in the NTP bioassay and the Agency's preliminary analysis of the consequences of these deviations on the conclusions reached in the study. Based on this previous analysis and the Agency's review of comments received from the public in response to the ANPR, OSHA continues to agree with the conclusion of the NTP Board of Scientific Counselors' Technical Reports Review Committee that the study conduct had no significant impact on the results or conclusions of the study.

In addition to reviewing the public comment on the ANPR and NTP's response to the CMA audit, OSHA requested that ICF/Clement review the CMA audit and respond to each of the issues raised therein as part of a risk assessment of BD carried out under contract with OSHA (Ex. 23-19). OSHA is satisfied with both NTP's and ICF/Clement's responses to CMA's concerns regarding the BD inhalation bioassay. Although Good Laboratory Practices are important, particularly in studies which form the basis for OSHA regulations, the deviations from Good Laboratory Practices which occurred in the BD inhalation bioassay are not of sufficient magnitude to affect the conclusion that BD caused cancer in these laboratory animals. This position is supported by the preliminary results of a second BD inhalation bioassay recently completed by NTP and reported on by Melnick et al in a paper received by OSHA (Ex. 23-101). The paper presents data which show that the results of this first inhalation bioassay, namely statistically significant excesses of common and uncommon neoplasms in B6C3F₁ mice, have been replicated.

(ii) *The IISRP Rat Study.* A two year study of the toxicity and carcinogenicity of BD in rats, sponsored by the International Institute of Synthetic Rubber Producers (IISRP), was conducted by Hazleton Laboratories England (HLE) (Ex. 2-31). The results of this study have been recently published (Ex. 23-84). The exposure groups

consisted of 110 male and 110 female Charles River CD rats of the Sprague Dawley strain. The animals were exposed for six hours per day, five days per week to nominal concentrations of 0 ppm, 1,000 ppm, and 8,000 ppm of BD. Actual concentrations averaged 0.7 ppm, 999 ppm, and 7,886 ppm over the course of the experiment. Concentrations of the dimer, 4-vinyl-1-cyclohexene, averaged 413 ppm over the course of the study. When dimer concentrations exceeded 500 ppm, steps were taken to reduce the concentration, but exposure was suspended only when dimer concentrations exceeded 1,000 ppm.

The rats were weighed and palpated for subcutaneous masses weekly. Prior to each exposure session, they were observed for clinical signs of exposure. Between the second and the fifth months of exposure, the rats in the high dose group exhibited signs associated with exposure. These included secretions from the eyes and nares and slight ataxia. After the fifth month of exposure, other clinical abnormalities were recorded, but the study's authors could not attribute them unequivocally to BD exposure.

At 3, 6, and 12 months, blood chemistry, hematology, and urinalysis were performed on a selected group of rats. Again, the authors would not unequivocally ascribe any changes detected in these analyses to BD exposure. After 52 weeks of exposure, ten rats from each sex and dose group were sacrificed. All sixty sacrificed animals were given a post mortem examination, but only rats from the control and high dose groups were given histopathological examinations. The post mortem examinations revealed a significant increase in liver weight between both exposure groups and controls, but the histopathological examinations showed no changes to account for the increase in liver weight. There was no evidence of systemic toxicity in any of the other organs or tissues examined.

The study was terminated at week 111 for the male rats and week 105 for the female rats. Gross necropsies were performed on all animals either sacrificed or found dead. A histopathological examination was performed on all tissues from rats in the high dose and control groups, but for rats in the low dose group, only tissues showing clinical signs at the gross necropsy were originally examined histopathologically. Unexamined tissues were processed to paraffin block stage. A year after termination of the study, IISRP requested that histopathological examinations be conducted on all low

dose group tissues from sites which showed elevated tumor incidence in the high dose group. These sites were the Zymbal gland, thyroid, lung, skin, mammary gland, pancreas, brain, uterus, and testes. In addition, for males only, all kidneys were examined.

Survival among male rats at termination of the study, was 45% for controls, 50% for the low dose group, and 31% for the high dose group. These rates were adjusted for the interim sacrifice at one year. Survival for the high dose males was significantly reduced compared to controls ($X^2=4.16$; $p<.025$), but survival for the low dose males was better than survival for the controls. The survival among female rats at termination of the study was 46% for controls, 32% for the low dose group, and 24% for the high dose group. These rates were also adjusted for the interim sacrifice at one year. Survival for both the low dose and the high dose groups was significantly reduced compared to the controls (low dose: $X^2=4.12$, $p<.025$; high dose:

$X^2=10.64$, $p<.001$), but a comparison of the survival functions of the three groups showed that only the survival function of the high dose group significantly differed from the survival function of the control group ($p<.01$).

Volumes III and IV of the HLE report contain pathology reports for every rat in the bioassay. These pathology reports included "cause of illness" or "cause of death" for all rats dying prior to termination of the study. The leading causes of death for male rats were nephropathy and pituitary adenomas. For the female rats, the leading causes of death were mammary tumors and pituitary adenomas. Some of the deaths attributed to mammary tumors occurred in rats with benign mammary tumors.

Overall tumor incidence among male rats was 84% for the controls, 70% for the low-dose group, and 87% for the high dose group, and among female rats was 97% for the controls, 98% for the low dose group, and 94% for the high dose group. Note that not all tissues from low dose animals were examined

histopathologically, so the overall incidence for the low dose groups could be an undercount.

Elevated tumor incidence occurred at several different sites. Table 2 presents a summary of the incidence of these tumors. The numbers in Table 2 were derived from the individual pathology reports. Tumor incidence was significantly elevated in high dose male rats at only two sites: the pancreas and the testes. At both of these sites, incidences showed a significant dose-related trend. Gliomas of the brain showed a dose-related trend in male rats, but the trend is not statistically significant. In the original HLE report, these gliomas were divided into three categories, but after reviewing the pathology records on individual rats, it was decided that all these tumors could be grouped together simply as gliomas. Zymbal gland carcinomas neither occurred at a significantly elevated rate nor showed a dose-related trend, but these tumors are rare and thus are presented.

TABLE 2.—SUMMARY INCIDENCE OF PRIMARY TUMORS IN CHARLES RIVER CD RATS INDUCED BY INHALATION OF 1,3-BUTADIENE *

	Controls	1,000 ppm	8,000 ppm
Males:			
Pancreas: Exocrine.....	3/100	1/100	11/100
Adenoma or Carcinoma.....	$p<.01^b$	$p=.939^c$	$p=.025^c$
Testes.....	0/100	3/100	8/100
Leydig Cell Tumor.....	$p<.01$	$p=.123$	$p=.003$
Brain: Glioma.....	1/100	3/100	5/100
	$p<.10$	$p=.311$	$p=.106$
Zybal Gland.....	0/100	1/100	1/100
Carcinoma.....	$p<.50$	$p=.500$	$p=.500$
Females:			
Thyroid: Follicular.....	0/100	4/100	11/100
Adenoma or Carcinoma.....	$p<.001$	$p=.061$	$p<.001$
Mammary Gland.....	40/100	75/100	67/100
Fibroadenoma.....	$p<.001$	$p<.001^d$	$p<.003^d$
Uterus/Cervix.....	1/100	4/100	5/100
Stromal Sarcoma.....	$p<.25$	$p=.184$	$p=.106$
Zymbal Gland.....	0/100	0/100	4/100
Carcinoma.....	$p<.025$	$p=1.0$	$p=.061$

* Numerator is number of animals with tumors; denominator is number of animals examined at the site. It is assumed that all animals were examined at each site.

^b The p-value given below the incidence for controls is the p-value associated with the Cochran-Armitage Trend Test.

^c The p-value given below the incidence for the exposed groups is the p-value associated with the Fisher Exact Test of exposed versus controls.

^d Fisher Exact Test approximated by a Chi-square Test for Independence. For controls versus low dose, $X^2=25.06$; for controls versus high dose, $X^2=14.65$.

In female rats, significantly elevated tumor incidence also occurred at only two sites: the thyroid and the mammary gland. At both of these sites there was a statistically significant dose-related trend. Elevated tumor incidence occurred in the uterus/cervix and the Zymbal gland as well, but in neither of these cases was the increase statistically significant. The incidence of Zymbal gland carcinomas was nearly significant ($p=.06$), and there was a significant dose-related trend ($p<.025$).

The majority of mammary tumors observed in the female mice were mammary fibroadenoma. Many experts

believe that mammary fibroadenomas represent a carcinogenic response although these tumors are not in and of themselves carcinogenic. For example, in their system for categorizing evidence of carcinogenicity, NTP holds that the category "Clear Evidence of Carcinogenicity", the strongest of the categories, may be demonstrated by a "substantially increased incidence of benign neoplasms." NTP applied this criterion in evaluating results from an inhalation bioassay of methylene chloride involving F344/N rats. In that evaluation, NTP concluded there was "clear evidence carcinogenicity for

female rats as shown by increased incidence of benign neoplasms (fibroadenomas) of the mammary gland" (Ex. 7-008). Nevertheless, some argue that because these tumors occur at a high background rate and are not known to become malignant, their relevance is uncertain.

There can be no doubt that there was a substantially increased incidence of mammary fibroadenomas in the exposed female rats in the HLE study. The low dose group had an 88% increase in incidence over controls, and the high dose group had a 68% increase in incidence over controls. These increases

are statistically significant ($p < .003$). Not only was an increase in incidence of benign mammary neoplasms observed, but an increase in the number of tumors per tumor bearing rat was also observed in the exposed groups. An increase in the number of mammary tumors per tumor bearing rat provides additional evidence to denote the relative strength of the carcinogenic stimulus (Ex. 23-25). Table 3 presents the number of mammary fibroadenomas observed in all female rats. Although an increase in the number of tumors per animal cannot be quantified in mathematical dose-response models, they give further support to the position that BD is a carcinogen in rats.

TABLE 3.—NUMBER OF MAMMARY FIBROADENOMAS OBSERVED IN FEMALE CD RATS EXPOSED TO 1,3-BUTADIENE

No. of mammary fibroadenomas per female rat	Number of female rats		
	Controls	1000 ppm	8000 ppm
0.....	60	25	33
1.....	28	25	19
2.....	9	11	15
3.....	3	9	7
4.....	0	6	8
5.....	0	4	5
6.....	0	5	3
7.....	0	4	5
8.....	0	4	4
9.....	0	2	0
10.....	0	4	0
11.....	0	1	1
Total number of tumor-bearing rats.....	40	75	67
Average number of tumors per tumor-bearing rat.....	1.38	3.70	3.33

Nephropathy, or degeneration of the kidneys, was the most common non-carcinogenic effect reported for male rats and was one of the main causes of death for the high dose males. The incidence rates of nephropathy are presented in Table 4. The combined incidence of marked or severe nephropathy is significantly elevated in the high dose group over incidence in the low dose group and over incidence in the controls ($p < .001$). HLE's analysis of "certainly fatal" nephropathy shows a significant dose-related trend ($p < .05$), but when "uncertainly fatal" cases are included, the trend disappears.

TABLE 4.—INCIDENCE OF NEPHROPATHY IN MALE CD RATS EXPOSED TO 1,3-BUTADIENE

Degree of nephropathy	Controls	1000 ppm	8000 ppm
None.....	13/100	25/100 $p = .03^{**}$	9/100 $p = .36^*$
Minimal.....	29/100	32/100	11/100

TABLE 4.—INCIDENCE OF NEPHROPATHY IN MALE CD RATS EXPOSED TO 1,3-BUTADIENE—Continued

Degree of nephropathy	Controls	1000 ppm	8000 ppm
Slight.....	38/100	$p = .65$ 27/100 $p = .10$	$p < .01$ 42/100 $p = .57$
Moderate.....	10/100	$p = .45$ 7/100 $p = 1.0$	$p = .82$ 11/100 $p = .01$
Marked.....	3/100	$p = 1.0$ 3/100 $p = .78$	$p = .01$ 14/100 $p = .16$
Severe.....	7/100	6/100 $p = .78$	13/100 $p = .16$

* The p-value is associated with a Chi-square approximation of the Fisher Exact Test (exposed versus controls).

** Incidence of no nephropathy is significantly higher among low dose males over control males.

The HLE study authors concluded that the interpretation of the nephropathy incidence data was equivocal. They stated that "an increase in the prevalence of the more severe grades of nephropathy, a common age-related change in the kidney, was considered more likely to be a secondary effect associated with other unknown factors and not to represent a direct cytotoxic effect of the test article on the kidney."

Other non-carcinogenic effects observed in the HLE rat study were elevated incidence of metaplasia in the lung of high dose male rats killed at the end of the study over incidence in male controls killed at the end of the study (10/31 vs 5/45), and a significant increase in high dose male rat kidney, heart, lung, and spleen weights over the organ weights in control male rats ($p < .05$ for all but the kidney where $p < .01$).

The HLE study authors concluded that BD is "associated with 44 statistically significant increases in both common and uncommon tumor types." Although the authors found the biological interpretation of some of these data equivocal, they nonetheless concluded that based on the weight of the evidence, BD is an oncogen which elicited a weak response in the rat.

OSHA agrees that BD is carcinogenic in rats but is concerned about certain issues which arose in its analysis of the HLE study and which may affect the interpretation of the study. The first of these is that there appears to have been a failure in the randomization process, for the male rat groups do not seem to be comparable. Specifically, the low dose male rats appear to have been healthier than the male rats in the control group. The low dose males had an overall tumor incidence of 70% which is significantly lower than the 84% overall tumor incidence observed among the male controls ($X^2_1 = 5.53$, $p < .05$).

Although this difference could be due to the fact that not all tissues were examined from the low dose males, OSHA notes that not all tissues were examined for the low dose females, yet the overall tumor incidence for that group was the same as for the female controls.

The nephropathy incidence data give further evidence that the male rat groups were not comparable. The HLE study authors concluded that there was no difference in nephropathy incidence between control and low dose males. OSHA, however, finds this conclusion to be erroneous. HLE looked only for significant excess of nephropathy in the low dose group. If nephropathy is an age-related condition, one would expect to see more low dose males with some degree of the condition because the low dose males lived longer. Instead, only 75% of the low dose males had any degree of nephropathy whereas 87% of the controls had some degree of the condition ($p = .03$). This suggests that the low dose males were less susceptible to kidney degeneration than the controls which, in turn, implies that the two groups were not comparable.

The low dose male rats also differed from the other groups of rats in the number from that group which had "abnormal teeth." Nine low dose male rats were sacrificed because of abnormal teeth, while in the other groups, the numbers sacrificed for this reason were: four in the male control group; three in the male high dose group; three in the female high dose group; and none in either the female low dose group or the female control group. The incidence of sacrifice because of abnormal teeth in the low dose male group was significantly elevated over the incidence of sacrifice because of abnormal teeth in every other sex/dose group except the male control group, where it approached significance ($p = .125$). This difference furthers the concern that the low dose male rats were not comparable to the other rat groups.

In addition to its concern about the lack of comparability among male rat groups, the Agency is concerned about the adequacy of the study audit to which this bioassay was subjected (Ex. 28-19). Slide-block comparisons were made for only ten out of 600 animals (2%). In the NTP study, slide-block comparisons were made for all control and high dose animals. The study auditors were unable to locate raw data sheets for 74 (12%) of the study animals. Therefore it was impossible to verify the study's final report as an accurate reflection of the raw data.

OSHA is aware that the HLE study, which began in 1977, was performed in accordance with the Good Laboratory Practice regulations in place at that time. While the Agency does not believe that the study is fatally flawed, it is concerned about the issues discussed above. Nonetheless, the Agency believes that the HLE study demonstrates the carcinogenicity of BD in rats.

2. Epidemiologic Studies

Evidence of an association between occupational BD exposures (BD) and cancer mortality is found in studies of BD monomer production workers (Downs, Ex. 17-33), styrene-butadiene rubber workers (SBR), (Meinhardt, Ex. 2-26; Matanoski, Ex. 2-27; McMichael, Exs. 23-4 and 23-41), and SBR production workers in the rubber industry (general/SBR), (Andkelkovic, Exs. 23-27 and 23-3). What is most striking about these studies is the consistency of the observed elevated incidence of lymphomas, leukemias, and other neoplastic diseases of the hematopoietic system among BD workers.

OSHA evaluated these five studies which have also been reviewed by the International Agency for Research on Cancer (IARC) (Exs. 23-31 and 23-32), ICF/Clement (ICF) (Ex. 23-19), the Chemical Manufacturers of America (CMA) (Exs. 17-31 and 28-14), and the International Institute of Synthetic Rubber Production (IISRP) (Exs. 17-28 and 17-32).

In these epidemiological studies, increased risk of death is measured by the standardized mortality ratio or SMR. An SMR is the ratio of the observed number of deaths to the expected number of deaths multiplied by 100. The relevance of the SMR depends upon the choice of the standard population from which we expected the number of deaths is derived. For instance, one worker population should experience SMRs similar to another worker population while the general population, which includes sick and disabled or institutionalized persons, usually experiences greater mortality risk. Active workers must be healthy enough to have been, and to remain, employable. Populations of active industrial workers have been estimated to experience a mortality risk of 60% to 90% (SMR=60 to 90) of that found in the general population (McMichael, 1976, Ex. 23-40). This lowered mortality risk among industrial workers is known as the "healthy worker" effect.

In assessing the association between BD exposure and cancer death, the rate of death in the exposed group is

evaluated to determine whether it differs from the rate of death in the nonexposed group and if so, whether this is due to chance or cause. Because of the inherent variability in biologic systems, the rate of cancer in one group of workers exposed to a carcinogen will often differ slightly from the rate in a second group exposed in a similar manner simply by "chance". If the rates of death differ greatly, tests of statistical significance provide an estimate of the probability that the result could have arisen by chance alone or is due to a causal association. When an SMR is significantly elevated, this means that there is little probability that an observed association between exposure and death is due to chance alone.

Tests of statistical significance, however, can be misinterpreted. The p-value used in these studies represents the probability that an observed excess of cancer deaths occurred by chance alone. When the p-value is smaller than some value, usually .05, we conclude that an observed result could not be due to chance alone and must therefore be due to BD exposure. This choice of significance level is arbitrary and should not be taken alone as evidence of a meaningful excess or a non-excess of cancer mortality. An observation of no significant increase in a specific cause of death at the .05 level in a study may indicate no association, but it may be due to other factors such as a small sample size or other methodologic limitations. Likewise, a significant increase at the .05 level in a site-specific cause of death does not necessarily mean that there is a causal association.

Below is a brief description of each of the studies and the various comments and criticisms put forth by the reviewers. OSHA reviews these data together in part (d) of this epidemiology portion and presents a summary of the studies in part (e).

(i) *Workers Engaged in BD Monomer Production.* Downs et al. followed a cohort of workers with primarily BD exposures. Cause-specific mortality in the 2,586 male workers employed in BD monomer producing plant at least six months between 1943 and December 31, 1979 was examined. The study plant was one of three facilities built during World War II in Port Neches, Texas (Neches Butane). Other products, such as isobutylene polymers and isoprene, are produced in this plant. Qualitative exposure data were available. There were 603 deaths that were known to have occurred in the cohort through 1979. Death certificates were obtained for all but 24 (4%). Of the remaining 1,983 persons in the cohort, the vital status of 73 (2.8% total) was unknown.

SMRs for all lymphohematopoietic cancer (All LHC) and for different types of lymphohematopoietic cancer (LHC) in the total cohort are included in Table 5. The types of LHC in the group "All LHC" are lymphosarcoma/reticulosarcoma (LSC/RCS), Hodgkin's Disease (HD), multiple myeloma (MMY), leukemia, and other specified lymphoma (non-Hodgkin's Disease lymphoma (NHL)) in both the seventh and eighth revisions of the International Classification of Diseases (Ex. 23-34) and polycythemia vera (PV) and myelofibrosis (MF) in the eighth revision. The SMR for lymphosarcoma/reticulosarcoma (LSC/RCS) is significantly elevated for the total cohort.

TABLE 5.—SMRs for LHC in BD Monomer Facility, Total Cohort

Type of cancer *	SMR	Observed
All Causes.....	*80	603
All LHC *.....	143	21
LSC/RCS *.....	*235	8
Hodgkins Disease (HD).....	102	2
Other.....	124	4
Leukemia.....	119	7

*p less than 0.05.

* International Classification of Diseases, Eighth Revision (ICDA-8, Ex. 23-34).

* LHC-all lymphohematopoietic cancer, ICDA-8, Nos. 200-208, no myelofibrosis (MF, ICDA. No. 209.30).

* LSC/RCS-lymphosarcoma/reticulosarcoma, ICDA-8, No. 200.

* Other—includes other (ICDA.200), multiple myeloma (MMY)(ICDA.203), and polycythemia vera (PV), ICDA.208).

A qualitative scale for exposure to BD was constructed based on an employee's function at the plant and level of exposure. Four groups were developed: Low exposure, routine exposure, non-routine exposure, and unknown exposure. Workers in the low exposure category were exposed to low levels of BD on a non-routine basis. Workers in the routine exposure category had high BD exposures on a routine basis. Workers in the non-routine exposure category had the highest BD exposures but on a non-routine basis. It is noteworthy that elevated LHC SMRs were observed in all three occupational function groups with known BD exposures. These results are presented in Table 6.

TABLE 6.—SMRs for LHC by Occupational Groups

Exposure group	Type of cancer	SMR	Observed
Low *.....	All LHC.....	128	3
	LSC/RCS and other *.....	190	2

TABLE 6.—SMRs FOR LHC BY OCCUPATIONAL GROUPS—Continued

Exposure group	Type of cancer	SMR	Observed
Routine *	All LHC.....	187	6
	LSC/RCS and other *	282	4
Non-routine *	All LHC.....	167	10
	LSC/RCS and other *	150	4
	Leukemia.....	201	5

* Low=low exposures on a non-routine basis; routine=high exposures on a routine basis; non-routine=highest exposures on a non-routine basis.

* ICDA-8 Numbers 200,202,203,208,209 [non-Hodgkin's lymphoma (NHL), multiple myeloma (MMY), lymphosarcoma/reticulum cell sarcoma (LSC/RCS), myelofibrosis (MF), polycythemia vera(PV)].

In general, research on BD has focused only on qualitative estimates of exposure and associated relative risks of death from specific cancers. In order to strengthen these qualitative risk estimates, OSHA has attempted to evaluate workers' exposures to BD in relation to relative risk of death from all

LHC using job titles. Since the cohort studied by Downs was exposed primarily to BD, this grouping of workers is likely to yield the most specific BD related exposure data.

Downs selected sub-groups of the study population with more or less uniform exposure, or at least the same pattern of exposure, such as working in a particular department, or process, or a particular job category, or some other suitably defined group in which the level and frequency of exposures are thought to be roughly the same for everybody. In the Downs study, classification of workers was conducted by the researchers after consultation with the staff at the plant and before analysis of the data was undertaken. The original paper provides additional detail for qualitative exposure assessment.

For OSHA's analysis, exposure, the principal independent variable, consists of categories of job titles (with their exposure ratings and frequency of BD exposures). An exposure level rating (ER) from 1 to 4 was assigned to each

job title category based on the author's description of exposure levels. An ER=1 is a low BD exposure (BD not in usual work area and not handled by worker); ER=2 is medium exposure (BD in work area but employees do not handle); ER=3 is high exposure (BD exposure levels in work area are high but worker doesn't handle BD); ER=4 is the highest exposure (intimate, very high, inhalation and dermal exposure, workers handle BD). Handling BD involves a high potential for inhalation of high concentrations of BD or for skin contact with BD. Each job category was assigned a value indicating the frequency of BD exposure, based on the authors' descriptions. Frequency factors (F) were: 1—infrequently exposed; 2—occasional but regular exposures (non-routine); and, 3—routine and continuous exposures. An Exposure Value (EV) was assigned to each job group by multiplying the (ER) by (F). Exposure Value=(Exposure Rating) × (Frequency Factor), or EV=(ER) × (F). The EVs by job group are shown in Table 7.

TABLE 7.—EXPOSURE VALUE BY JOB GROUP, BY STUDY

Exposure description	Study job group		
	Downs	(ER) × (F) = EV	Relative EV*
Low; Non-Routine.....	Low.....	(1) × (2) = 2.....	1
Highest; Non-Routine.....	Non-Routine.....	(4) × (2) = 8.....	2
High; Routine.....	Routine.....	(3) × (3) = 9.....	3

*Relative EV: lowest EV per job group has relative EV=1; highest EV=total number of job groups.

The EV allows the comparison of groups of workers by relative exposure, that is, the lowest EV is the lowest relative effect. Relative exposure is being compared with relative effects, the dependent variable. The principal effect under consideration is death from all lymphohematopoietic cancer measured by SMRs. The degree of concordance between relative EVs and SMRs for all lymphohematopoietic cancer indicates that an increase in BD exposure, approximated by job category, is producing a real increase in SMRs for All LHC. (See Table 8).

TABLE 8.—THREE PAIRS OF VARIABLES

[EVs and associated SMRs for all lymphohematopoietic cancer]

Relative EV	Job group	EV	SMR
1.....	Low.....	2	128
2.....	Non-routine.....	8	167
3.....	Routine.....	9	187

CMA put forth several criticisms of the Downs report. One of these is that the lymphohematopoietic cancers represent a heterogeneous group of diseases whose etiologies are uncertain. However, on the basis of the difficulty of distinguishing these diseases clinically from each other, there is general agreement in standard medical textbooks that the diseases in this group may represent progression from one to another stage of the same disease in one individual (Gunz, Ex. 23-30; Jaffe and Costan, Ex. 23-35; Wintrobe, Ex. 23-47).

Furthermore, recent studies using chromosomal banding (Kersey, 1983, Ex. 23-37; Yunis, 1983, Ex. 23-48; Bloomfield et al., 1978, Ex. 23-29) indicate that leukemia can result from a genetic lesion to or transformation in the genetic material of, the primitive stem cell that can differentiate into any of the blood cells. Therefore, any form of leukemia, lymphoma, or possibly NHL/MMY may be possible as a result of exposure to a cancer-causing substance. For the above

mentioned reasons, the group "All LHC" seems reasonable for use in analysis.

Some criticism was raised by CMA (Ex. 28-14) that SMRs for leukemia were elevated in the non-routine group of workers and not in the routinely exposed group. Commentors were of the opinion that this observation suggested no association with BD exposures. The total cumulative dose of BD from short term exposures among non-routinely exposed workers, however, may have exceeded the total cumulative dose of BD among routinely exposed workers thereby leading to greater dose. This would be true in situations in which high short-term exposures to a substance are related to increases in death from a specific cancer while lower routine exposures are not. In terms of dose-response, short-term high doses of BD may be more relevant to leukemia than routine exposures. SMRs for LSC/RCS are elevated among routinely exposed workers above low and non-routinely exposed workers. It appears as though there may be an association between

routine BD dose and LSC/RCS response. In either case, frequency of dose is one of the main issues.

Two problems inherent in any occupational mortality statistics are sample size and misclassification of employee. In the Down's study, the number of workers in each job subgroup was adequate for analysis by OSHA. Of the total 603 deaths in this cohort, 89 were in the low exposure group, 108 were in the routine exposure group, and, 273 were in the non-routine exposure group. The remaining 133 deaths were among workers who were not classifiable as to exposure category. Small numbers of workers in each job subgroup result in lower power to detect increased health risk and may bias the study results in the direction of finding no association. Nevertheless, it appears as though SMRs for ALL LHC and LSC/RCS increase as routine BD exposure increases. Downs, as well as other researchers, has drawn inferences from this data.

Misclassification of workers would tend to obscure relationships between BD exposure and cancer. This is because workers with exposure frequencies and levels that are associated with a specific cancer might be included in another exposure group, resulting in excess cancer death in this latter group. The fact that Downs found elevated SMRs for LSC/RCS among employees in the total cohort and for ALL LHC in workers in each subgroup with known BD exposure, despite problems that would obscure any such relationship, strengthens the evidence of risk of these cancers being associated with BD.

(ii) *Workers Engaged in Styrene-Butadiene Rubber (SBR) Production.* Industrial hygiene monitoring data show detectable levels of BD among various production, processing, and maintenance jobs in SBR manufacturing (Ex. 17-27). OSHA considers it to be of value to review studies of SBR workers to evaluate SBR-related mortality excesses separately from mortality excesses among BD monomer production workers, since the latter employees are the most likely to have experienced primarily BD exposures.

Studies of workers in SBR facilities were conducted by three researchers (Meinhardt et al.; Matanoski et al.; and McMichael et al.). Matanoski stated that,

The synthetic rubber industry did not exist until 1943. At that time the federal government undertook to construct 15 plants in the U.S. all of which had similar design and all of which were committed to the manufacture of styrene BD rubber. An additional plant was constructed at that time

in Canada. The general construction of the plants as well as the basic processes used in these plants were similar * * * it is these U.S. plants and one in Canada with which NIOSH (Meinhardt) and the current study (Matanoski) have been concerned. Over time these companies have begun to manufacture various other types of rubber but, in general, their major product is still styrene BD rubber. The workers exposed to these substances should have been relatively young at the time of first start in the new industry and should have had no previous exposure to synthetic rubber polymer manufacturing processes. Two major changes took place in most of the plants in the early operations. These were a change from batch to continuous feed manufacturing process and the addition of low-temperature rubber production. Cold rubber production was begun in the late 1940's to early 1950's in most plants (Ex. 23-39).

Because employees had limited exposure to other substances, the SBR studies are particularly useful in assessing employees' risks from exposure to BD.

Meinhardt et al. reported the results of a retrospective cohort mortality study conducted at two adjacent SBR facilities in Port Neches, Texas, (plant A, B.F. Goodrich and plant B, Firestone/U.S. Rubber Co.). Workers in plants A and B were followed from January 1943 and January 1950, respectively, to the study cutoff date of March 31, 1976. The study cohorts from plants A and B consisted of 2,756 white males who had at least 6 months non-management and non-administrative employment. While the study was being conducted in 1982, a limited number of environmental samples were obtained at each plant. Historical monitoring data were not available for either plant. The SMR for all causes of death for plant A was 80, (252 Obs, 315 expected deaths), and for plant B was 66 (80 Obs, 115 expected deaths).

Workers were counted as cases in the cohort analysis if: (1) They were employed more than 6 months; (2) they died within the cohort study date; (3) cancer was coded as the underlying cause of death; and (4) they were white males. In plant A, five deaths from leukemia were included in the mortality analysis. Six other workers with leukemia were excluded from analysis because they did not fit the cohort definition. Two of these six workers were excluded because they had worked less than six months; another two workers were excluded because they were alive at the time of the reporting of the study results. A fifth worker died of leukemia after the study cut-off date, and the sixth worker was non-white.

For cohort B, there was a significant deficit of mortality from all malignant neoplasms. One leukemia death was included in the mortality analysis. Three other individuals employed in the plant and diagnosed with leukemia were excluded from the analyses because they did not fit the cohort definition. For two of these workers, leukemia was not coded as the underlying cause of death by the nosologist. The third worker with leukemia was alive at the time of the reporting of the study results.

The likelihood of detecting a 2-fold relative risk of leukemia was 26% for cohort A and 13% for cohort B. Thus, if excess leukemia risks were less than two times that of the general population, the probability of detection was very low.

Both CMA (Ex. 28-14) and IISRP (Ex. 17-28) stated that the Meinhardt study found no statistically significant excess in total mortality or cause-specific mortality in the total cohort. However, OSHA notes that statistically significant excesses were observed for leukemia using a one-sided test, the methodology OSHA believes is appropriate in an occupational study. The authors stated regarding the use of the two-sided test statistic that it is:

"conservative in its ability to detect significant differences, if there is no reason to believe the environment would be protective against cause specific mortality (acknowledging the operation of the employment selection bias known as the healthy worker effect). Historically, it was the custom at the National Institute for Occupational Safety and Health to use the conservative two-sided test statistic. Prior to and at the time this report was prepared and originally presented, two of the authors were debating the relative merits of one-sided versus two-sided test statistics. Although we subsequently agreed that the one-sided test statistic was more appropriate for tests of a specific hypothesis about a potential excess risk of cause-specific mortality we have left the two-sided test statistic in this paper since the results had already been presented in that way (Ex. 2-26)."

Some (Ex. 28-14) have stated that the excesses of death in the war cohort (subcohort Plant A, employees who worked 6 months or more in plant A between January 1, 1943 and not after 1945) were not observed in plant B. Comparable mortality analyses, however, could not be made between a "war cohort" in plant A and Plant B, since personnel records for workers in plant B were not accessible for the years 1943 to 1947.

Some (Ex. 28-14) have argued that BD could not have caused the leukemia deaths observed in the study because the leukemia cases were of different cell

types and therefore were not of common etiology. As stated previously, recent studies using chromosomal banding suggest that leukemia is the result from a genetic lesion or the transformation in a primitive stem cell (Kersey, 1983, Ex. 23-37; Yunis, 1983, Ex. 23-48; Bloomfield et al., 1978, Ex. 23-29). Since this cell can differentiate into any of the blood cells, any cell type of leukemia should be possible as a result of exposure to a leukemia-causing substance. In addition, while leukemia is one of the more accurately reported causes-of-death on a death certificate, changes have occurred in the way physicians diagnose cell type, i.e. in differential diagnoses. For all these reasons, OSHA is persuaded that leukemia need not have a common cell type to be significant and that the broad category of "leukemia" provides sufficient detail for the purposes of these analyses.

Others have commented that there was insufficient latency (3 years) for two leukemia cases in plant A, and therefore these two leukemia cases were probably not related to BD exposures. OSHA believes that the range of latency periods for leukemia is not inconsistent with the latencies observed in Meinhardt's Plant A. The period, between exposure to the carcinogenic stimulus and appearance of the clinically diagnosable cancer, is called the latent period. It is a summation of the time periods required for the

initiation of the malignant change, and for growth to a stage that permits recognition and diagnosis.

The median latency period in Hiroshima for radiation-induced leukemia was five years (Ex. 23-81). Thus, one would expect that individuals would have both longer and shorter periods of latency. With benzene exposure, some leukemia deaths appeared within a period of a few years from initial exposure (Ex. 23-82). Thus, it would appear as though a latency period of three years observed by Meinhardt, is within the range reported for known causes of leukemia.

Another criticism of the study was that multiple exposures occurred and that current BD levels at Plant B are higher than at Plant A, and, thus, a higher incidence of BD-associated disease should have been observed in Plant B. OSHA is of the opinion that current exposure levels in these plants do not necessarily reflect past exposure levels due to process and sampling changes. Thus, these current exposure data could be unreliable for use in determining a dose-response. Instead, calendar time, when BD exposures were known to be relatively higher due to the use of different processes (hot batch versus cold process), can be substituted. Since workers who worked in hot batch polymerization processes probably experienced the highest relative BD exposure among workers in this cohort,

excesses of BD-associated death would more likely be observed among the "war-cohort" workers. The only report on mortality among hot batch polymerization workers is provided by Meinhardt et al., who observed that all five individuals from plant A whose underlying cause of death was leukemia began employment before the end of December 1945. Therefore, the mortality experience of 600 white males "war-cohort" employees who are a subcohort of Plant A was analyzed separately. These employees worked 6 months or more in plant A between January 1, 1943, and the end of December 31, 1945, (and not after 1945) in hot temperatures, batch polymerization processes. At that time, working conditions were less well controlled than modern day practices due to the urgent wartime need for synthetic rubber.

The overall SMR of 83 for all causes of death among war-cohort employees was similar to that for the entire cohort from Plant A (overall SMR=80). Noteworthy SMRs for malignant neoplasms of lymphatic and hematopoietic tissues in the war cohort of plant A, which was a hot batch process, are included with SMRs from the cold process workers of plant B in Table 9. As can be seen, SMRs for ALL LHC, LSC/RCS, Hodgkins Disease, and leukemia are higher among the hot batch process workers.

TABLE 9—DEATH RATES BY CALENDAR TIME PERIOD (PROCESS), MEINHARDT STUDY

[Calendar Time Period (PROCESS)]

Cancer type	War Years (HOT)*			Post War Years (COLD) ^b		
	SMR	Observed	Exposed	SMR	Observed	Exposed
All LHC	*212	9	4.25	78	2	2.5
LSC/RCS ^c	224	3	1.34	132	1	0.8
H.D.	213	1	0.47	0	0	0.3
Leukemia ^d	*278	5	1.80	100	1	1.0

*Significant Excess, p less than 0.05, one-sided test.

^aPlant A subcohort.

^bPlant B.

^cIncludes only ICD-7 Number 200 for lymphosarcoma/reticulum cell sarcoma.

^dThe five cases of leukemia were: chronic myeloid (2 deaths), myelogenous (unspecified as to acute or chronic), acute myeloblastic, and acute lymphoblastic.

There is a possibility that this observation may be the result of a generalized exposure in the SBR industry. However, in order to affect the incidence of LHC, this generalized exposure would have to increase and decrease over time in the same way and magnitude that BD exposures change. The presence of a generalized exposure would not rule out the contribution to cancer death excess caused by BD exposure.

IISRP (Ex.17-28) suggested that the Meinhardt study was biased toward

finding excess leukemia because it was undertaken following a report of two leukemia deaths at these facilities, as opposed to a study conducted in a similar plant chosen at random. ICF (Ex. 23-19) pointed out, however, that the chance observation of the sentinel health event (two leukemia deaths in adjacent SBR facilities) by the astute clinician has historically served as the impetus for the initial investigation of many now commonly accepted occupational diseases. The investigators are able to minimize bias by choosing to

investigate the mortality rates for *all* employees with at least six months of non-administrative employment, and then comparing these rates to age, race, calendar time, and cause-specific mortality rates in the overall U.S. population. ICF stated:

Of more importance than selecting a "cluster" of disease, with respect to the selection of the study participants, is the dilution of the "true" study population, specifically those workers with significant occupational exposures, with employees who worked in non-hazardous areas of the plants

or worked primarily in administrative positions.

Thus, the chances are that this study might have masked such an association. In summary, OSHA is of the opinion that this study adds meaningful evidence to an association between exposure to BD and All LHC.

In a second study of SBR workers, Matanoski et al., 1982, first reported the mortality experience of individuals employed in seven U.S. and one Canadian styrene BD rubber (SBR) plants. These plants were not identified by name by the study authors. The study population consisted of males who had worked at these plants for more than one year. Statistical analyses were conducted on data from work records for each employee from the time each company's recordkeeping system became complete.

Vital status was determined through 1976. The total study population was 13,920. Out of eight separate plant cohorts, four (plants 3, 6, 7, and 8) were followed from 1943. In these plants, more than half of the original worker population was excluded from analyses due to incomplete records. In the remainder of the plants, follow-up starting dates were: Plant 5, 1953; plant 2, 1958; plant 1, 1964; and plant 4, 1970. The start-up date for each of the latter four plants was different, and thus the follow-up time for workers at each plant was different. In these latter plants, 30 to 56% of the original worker population was excluded. Thus, most of the employees from plants 1, 2, 4, and 5, were not followed long enough for complete evaluation of carcinogenic risk, and OSHA is concerned about selection bias in the former four plants, which would have excluded many workers who worked in 1943 when there were relatively higher BD exposures.

The SMR for all workers at all plants for all causes of death was 8; the SMR for black workers was 98, and for whites the SMR was 78. The average age at death was 62 years. No specific causes of death were significantly elevated.

Power calculations were performed to test the ability of the data to determine increases in risk greater than the U.S. population. Most cancer risks less than two times that of the general population would have a low probability of detection even with this large population of workers. For instance, the probability of detecting a 50% increase in leukemia (SMR=150) was .62, while the probability of detecting such an increase in kidney cancer or other lymphatic cancer was about .45.

CMA (Ex. 28-14) stated that the power of the Matanoski study greatly exceeded

that of the Meinhardt study, and therefore the Matanoski study should receive correspondingly greater weight for risk assessment purposes. This statement indicates a misunderstanding of power. The power of a study relates to the ability of a study to detect an effect. There are factors that affect the ability to detect an effect. The Matanoski study did not show any overall site-specific cancer to be in significant excess. Hence, the power of the study to detect elevated risks of site-specific cancer death was calculated, and it was determined that the probability of detecting elevated cancer risks was low. When a study indicates an increased risk of a particular cause of death, a power calculation is not necessary as the ability of the study to detect such an excess is not an issue.

Analysing these data, EPA (Ex. 17-27) found several limitations that could lead to an underestimate of the cancer risks to BD employees including exclusion of over half the original cohort, misclassification of living employees, insufficient latency, low power to detect increased cancer risk, and lack of historical exposure.

CMA (Ex. 28-14) commented that the bulk of the excluded workers were short-term employees, probably workers employed during the war years (1943-45) and therefore the least likely to be affected by BD exposure. OSHA agrees that the study excluded many employees who worked during the war years, but OSHA disagrees with the conclusion that these workers had the least BD exposures.

Studies of other industrial cohorts have shown a relatively higher risk of death for the disease known to be related to the substances under study among short term workers (Infante and Schneiderman, 1986, (Ex. 23-33)). Any one group that is systematically under-represented can alter the findings and conclusions of the study. In an effort to investigate cancer etiology, inclusion of all groups in which there is some evidence of a possible association is preferable, and the exclusion of such workers from a cohort may bias the results toward finding no association. OSHA believes that although the effect of the exclusion of "early workers" is not known, it is reasonable to assume that the loss of their data reduces the chance of identifying relationships between BD and disease.

Subsequent to OSHA's publication of an Advance Notice of Proposed Rulemaking, Matanoski updated the original study by following workers for three additional years, (Ex. 2-27). The total population included 12,107 male workers, and all analyses were adjusted

to include only workers who were 45 years of age or older and who had 10 years of SBR employment. For specific details, readers are referred to the original paper. Mortality was analyzed by four job categories: production, maintenance, utilities, and other. The elevated LHC cancer SMRs among production workers are included in Table 10.

TABLE 10.—SMRs AMONG ALL (WHITE AND BLACK) PRODUCTION WORKERS

Cancer type	SMR	Observed	Expected
All LHC.....	146	19	13.0
LSC/RCS.....	038	1	2.6
Hodgkins disease.....	120	2	1.7
Other*	**260	9	3.5
Leukemia.....	142	7	4.9

* Other excludes: LSC/RCS, HD, and leukemia.
** p=.02, two sided test.

One of the major findings of the Matanoski follow-up study was a significantly elevated SMR for "other LHC" among production workers (9 Observed vs. 3.5 Expected, SMR=260, 95% CI 1.2-4.9, p=0.02) reflecting excesses for both black and white employees. In addition, SMRs for non-white production workers were significantly elevated for leukemia (3 observed vs. 0.42 expected, SMR=710, 95% CI 1.5-20.9, p=0.01) and for all LHC (6 observed, vs. 1.2 expected, SMR=504, 95% CI 1.8-11.0, p=0.003). Production workers, who had the highest relative continuous BD exposures, had an SMR of 146 for all LHC. Utility workers (SMR=203) had highest BD concentrations on a non-routine basis.

Matanoski identified employees by work areas who were most likely to have experienced relatively higher BD exposures and selected sub-groups of the study population with more or less uniform exposure. Patterns of exposure are thought to be roughly the same for everybody. Workers were classified into four major categories: maintenance, production, utilities, and unknown. OSHA evaluated SMRs by three of these four general work areas in order to strengthen the qualitative risk estimates, as was done by OSHA in the Downs study.

As stated previously, the principal independent variable, consists of categories of job titles in work areas (with their exposure ratings and frequency of BD exposures). The same exposure level rating system used in the Downs' study, (ER) from 1 to 4, was assigned to each category based on the author's description of exposure levels. Each category was assigned a value

indicating the frequency of BD exposure, based on the authors' descriptions. Frequency factors (F) were: 1-infrequently exposed; 2-occasional but regular exposures (non-routine); and, 3-routine and continuous exposures. An Exposure Value (EV) was assigned to each job group by multiplying the (ER) by (F). Exposure Value = (Exposure Rating) \times (Frequency Factor), or EV = (ER) \times (F). The EVs by job group are shown in Table 11.

TABLE 11.—EXPOSURE VALUE BY JOB GROUP, BY STUDY

Study Job Group			
Exposure description	Matanoski	(ER) \times (F) = EV	Relative EV
Low; Infrequent.	Maintenance.	(1) \times (1) = 2	1
Medium; Routine.	Production.	(2) \times (3) = 6	2
Highest; Non-Routine.	Utilities.	(4) \times (2) = 8	3

The degree of concordance between relative EVs and SMRs for all lymphohematopoietic cancer indicates that an increase in BD exposure, approximated by job category, is producing a real increase in SMRs for All LHC. (See Table 12).

TABLE 12.—THREE PAIRS OF VARIABLES

[EV's and associated SMRs for all lymphohematopoietic cancer]

Relative EV	Job group	EV	SMR
1.....	Maintenance.....	1	75
2.....	Production.....	6	146
3.....	Utilities.....	8	203

The results from Matanoski's recent nested case-control study of workers in this cohort (Ex. 29-1) indicated that BD is associated with the risk of developing leukemia. The leukemia risk may be seven to nine fold higher in workers with BD exposure versus those without such exposure. IISRP (Ex. 23-68) criticized this case-control study stating that the result is inconsistent with previous research. Matanoski's previous study of the same population found significant excess in mortality rates from leukemia among non-white production workers.

However, it is well established that case-control studies, as opposed to cohort studies, are proper for use in testing etiologic hypotheses for specific rare diseases (Ex. 23-69), and OSHA is of the opinion that this nested case-control study provides further evidence

that exposures to BD are associated with an increased risk of death from cancer of the lymphohematopoietic system. OSHA is in the process of reviewing this study and the IISRP critique (Ex. 29-1). They have been placed in the OSHA BD docket and are available for public review and comment.

The third study of SBR workers was conducted by McMichael et al. who studied the mortality experience of a cohort of 6,678 hourly male workers employed in a rubber tire manufacturing plant in Akron, Ohio between 1964 and 1972. During the 9-year follow-up period, 1,783 workers died. The Standardized Mortality Ratio (SMR) for all causes of death for the total cohort was 99.

McMichael observed statistically significant excesses of mortality due to cancers of the stomach (SMR=187, observed=39, expected=20.9, p less than 0.001), prostate, (SMR=142, observed=49, expected=34.4 p less than 0.05), and LSC (SMR=226, observed=14, expected=6.2, p less than 0.01) among the total cohort.

In a follow-up case-control study published in 1976, McMichael et al., (Ex. 23-4) evaluated the relationship of the mortality excesses to specific jobs within this plant. Complete work histories of 1,482 of the 6,678 workers were obtained and were separated into 16 job titles. One of these job-title categories included workers who were engaged in SBR manufacturing where there was a potential for exposure to BD.

Cases included all 339 individuals who had died from stomach, colorectal, respiratory, prostate, and bladder cancers, and all LHC. Their work histories were compared with those from workers in an age-stratified randomized control group selected from the remainder of the plant. The length of time cases and controls worked in the 16 occupational title groups (OTGs) was calculated in order to determine the "ratios-of-exposure rates" (RERs) among cancer cases compared to the rates among controls. The RER unit was used by both IARC (Ex. 21-31) and EPA (Ex. 17-27) to review the McMichael study (Ex. 23-4). An RER is obtained by dividing the percent of workers with cancer (cases) who worked in the synthetic plant for 2 or 5 years by the percent of workers without these cancers (controls) in the same work area by duration of exposure. If there is no association between work in an OTG and occurrence of a specific cancer, it is expected that the RERs will stay the same as length of time increases, such as occurred with colorectal and bladder

cancer cases in the synthetic plant for 2 and 5 years. When the RERs increase with length of time, such as occurred for cancer of the stomach (1.7 for 2 years; 2.1 for 5 years), lymphatic leukemia (2.9; 3.7) and for all LHC (4.4; 5.6), a larger proportion of those who died from cancer worked for longer periods of time in the synthetic plant than expected, and the cancer is more likely to be associated with employment exposures to BD.

In reviewing these data, EPA (Ex. 17-27) stated that the increases in RERs for these neoplasms possibly indicated a dose-response relationship between exposure and cancer, thus strengthening the weight of evidence for causality. IARC (Exs. 23-31 and 23-32), relying on McMichael's finding that the age-adjusted RERs were 4.4 for those exposed for more than two years and 5.6 for those exposed more than 5 years, concluded that the study suggests an association between all lymphohematopoietic cancer (all LHC) and employment in SBR workplaces.

ICF (Ex. 23-19) pointed out that the major significance of the McMichael et al. study is to raise the index of suspicion concerning the role of SBR workplace exposures in contributing to the excess mortality among rubber workers, despite the failure, common in studies of chronic diseases, to match cases for age, race, and date of hire. OSHA's preliminary analysis agrees with this interpretation of the study. McMichael's age-stratified randomized sample of the total population, selected as controls, reduced the bias due to age.

(iii) *Workers Engaged in SBR Production and Fabrication of Rubber Products.* The cancer mortality experience of workers engaged in the general rubber industry, where workers are employed in SBR production, was investigated to separate excesses in mortality that are common to all general/SBR workers from site-specific cancer among SBR workers and, more specifically, from the mortality experience among those exposed to BD. A review of one study of general/SBR workers follows. One other study of general rubber workers (Monson, Exs. 23-5 and 23-6) was not included since the mortality experience of SBR workers was not studied separately.

Andjelkovic et al. 1976 studied the mortality experience, from January 1, 1964 through December 31, 1973, of 8,938 male rubber workers who worked any length of time in another rubber manufacturing plant located in Akron, Ohio. Some of the individuals worked in an SBR manufacturing area where there was a potential for exposure to BD.

During the 10-year observation period 2,373 (28%) of the white males died. Among all the workers, significantly elevated rates of death (p less than 0.05) due to monocytic leukemia (SMR = 311, Obs = 3) and "other LHC" were observed (SMR = 192, Obs = 10). This latter group included ICDA-8 Revision, Nos. 202 (other), 208 (PV), 209 (MF).

Some have commented that studies of general/SBR workers are limited for use in evaluating the health effects of BD because workers experienced multiple exposures and the number of workers employed in the SBR departments of these plants was small. OSHA is of the opinion that the study results by Andjelkovic are consistent with the study results of Matanoski who found excess LHC and LSC/RCS among production workers exposed to SBR and BD monomer. Andjelkovic's study results are consistent with the results of McMichael who studied SBR workers and who demonstrated a dose-response relationship between employment in an OTG, where the major exposure was to BD, and "All LHC" and lymphatic leukemia. Patterns of similar site-specific cancer risks across studies of general/SBR workers and SBR workers and BD monomer production workers lend support to BD being associated with these cancers.

(iv) *Summary of the Epidemiologic Studies*—(a) *All Lymphohematopoietic Cancer (All LHC)*. Tables 13 through 16 summarize the findings from each study with regard to all LHC. The rates of death generated in these five studies cover 45 years spanning two editions of the International Classification of Diseases (ICD), the seventh and the eighth revisions (Ex. 23-34). This long time span required achieving comparability between time periods covered when different rules of classification of underlying cause of death were in effect. Comparability codes for translation between the 7th and 8th revision of the ICD, developed by NCHS, (Ex. 23-44), were used to avoid artificially increased rates of death created by attributing deaths to a site-specific cancer solely because of a change in classification rules. There were no appreciable differences in the comparability statistics for leukemia. The comparability ratio is 0.9974, which indicated that the same number of deaths was assigned to "leukemia" whether the 7th or 8th revision was used (NCHS, 1975, Ex. 23-44).

For some cancer sites, no absolute equivalence can ever be achieved. For example, polycythemia vera (PV) and myelofibrosis (MF) were only classified as cancers in the 8th revision. At the level of aggregation used in these

studies, this should present few problems since whatever effects occur should be controlled by using rates of death for the same causes-of-death in both the numerator and denominator of the SMRs. About five percent more deaths were assigned by the 8th revision to the group of neoplasms categorized as "other neoplasms of lymphatic and hematopoietic tissues" (ICDA-8 Nos. 200-203, 208, 209) than were assigned by the 7th revision to the comparable title "Lymphosarcoma and other neoplasms of lymphatic and hematopoietic tissues" (ICD Nos. 200-203, 205). This increase was due in large part to the assignment of deaths to ICDA-8, Nos. 200-203, 208, 209 by the 8th revision that were assigned ICD, Nos. 294, 295, 297-299 by the 7th revision. Most of these differences in assignments resulted from the transfer of PV to ICDA-8 No. 208, in the eighth revision. In all the studies except Meinhardt's, which used the 7th revision, the 8th revision of the ICD was used. Potential problems relating to coding inequivalencies that remain should be limited to comparisons between "other LHC" in Meinhardt's study and "other LHC" in the other four studies. There are no coding differences between the McMichael, Matanoski, Downs, and Andjelkovic study results. Table 13 presents SMRs for All LHC for the five studies.

TABLE 13.—STANDARDIZED MORTALITY RATIOS (SMRs) AND OBSERVED DEATHS FOR ALL LYMPHOHEMATOPOIETIC CANCERS BY STUDY

Author (year)	SMR	Observed deaths	Cohort
Andjelkovic ('76)	124	52	Total (general/SBR).
McMichael ('74)	NR	NR	Total (general/SBR).
McMichael ('76)	*620	NR*	Synthetic latex department (SBR).
Meinhardt ('82)	155	9	Total Plant A (SBR).
Meinhardt ('82)	*212	9	War Plant A (SBR).
Matanoski ('87) ^b	097	55	Total (SBR).
Matanoski ('87)	146	19	Total production workers (SBR).
Matanoski ('87)	110	13	White production workers (SBR).
Matanoski ('87)	**504	6	Black production workers (SBR).
Downs ('86)	143	21	Total (BD).
Downs ('86)	187	6	Routine production workers (BD).

* This is a relative risk from a case/control study of 6.2 which is similar to an SMR of 620.

^b These data come from the three-year update.

NR: Not Reported.

* p less than 0.05, one sided test.

** p less than 0.025, one sided test.

(b) *Leukemia*. Table 14 shows mortality from leukemia among BD exposed workers. Leukemia death rates were significantly elevated for black production workers in Matanoski's study (SMR=710, Obs=3, Exp=0.4). SMRs for leukemia were significantly elevated for "war-cohort" workers in

Meinhardt's study (SMR=278, Obs=5). McMichael observed an increase in the relative risk of lymphatic leukemia for workers in the synthetic latex department where BD exposures occurred. Andjelkovic observed an elevated SMR for leukemia (SMR=138, Obs=25), and elevated SMRs for

lymphatic leukemia and monocytic leukemia among workers in the total cohort, (SMR=152, Obs=10; SMR=311, Obs=3, $p<.05$, respectively). Downs reported an elevated SMR for leukemia among workers in the total cohort (SMR=119, Obs=7).

TABLE 14.—STANDARDIZED MORTALITY RATIOS (SMRs) AND OBSERVED DEATHS FOR LEUKEMIA BY STUDY

Author (year)	SMR	Observed deaths	Cohort
Andjelkovic ('76)	138	25	Total (general/SBR).
McMichael ('74)	128	16	Total (general/SBR).
McMichael ('76) (lymphatic only)	**390	NR	Synthetic latex department (SBR).
Meinhardt ('82)	203	5	Total Plant A (SBR).
Meinhardt ('82)	278	5	War Plant A (SBR).
Matanoski ('87) ^b	102	22	Total (SBR).
Matanoski ('87)	142	7	Total production workers (SBR).
Matanoski ('87)	89	4	White production workers (SBR).
Matanoski ('87)	**710	3	Black production workers (SBR).
Downs ('86)	119	7	Total (BD).
Downs ('86)	81	1	Routine production workers (BD).

* This is a relative risk of 3.9 from a case-control study which is similar to an SMR of 390.

^b These data come from the three-year update.

NR: Not Reported.

* p less than 0.05, one sided test.

** p less than 0.025, one sided test.

In the McMichael, Andjelkovic, Matanoski, and Downs studies (ICD-8) and in the Meinhardt study (ICD-7), the diseases classified as leukemia are consistent.

(c) *Lymphosarcoma/Reticulum Cell Sarcoma (LSC/RCS)*. Table 15 shows mortality due to lymphosarcoma and reticulum cell sarcoma (LSC/RCS). Significantly elevated excess death rates from LSC/RCS were observed by

Downs (SMR=235, Obs=8), among the total cohort of BD workers. Meinhardt observed elevated death rates for these cancers (SMR=224, Obs=3) among "war-cohort" workers. Matanoski however, did not observe an excess SMR for these cancers in total production workers. In all these studies, whether ICD-7 or ICD-8 is used, the classification of diseases in this category is consistent (includes only

ICD-7, No.200 or ICDA-8, No. 200) except for routine workers as classified by Downs. For this group, ICDA. Nos. 200, 202, 203, 208, and 209 are included. Users of this data should be aware of the fact that this one group in Tables 11 and 12 includes more than just LSC/RCS cancers coded as ICDA. No. 200. The numbers of expected and observed cancers in some study subgroups are small.

TABLE 15.—STANDARDIZED MORTALITY RATIOS (SMRs) AND OBSERVED DEATHS FOR LYMPHOSARCOMA/RETICULUM CELL SARCOMA BY STUDY

Author (year)	SMR	Observed deaths	Cohort
Andjelkovic ('76)	088	8	Total (general/SBR).
McMichael ('74)	**226	14	Total (general/SBR).
McMichael ('76)	NR	NR	Synthetic latex department (SBR).
Meinhardt ('82)	181	3	Total Plant A (SBR).
Meinhardt ('82)	224	3	War Plant A (SBR).
Matanoski ('87)	*061	7	Total (SBR).
Matanoski ('87)	038	1	Total production workers (SBR).
Matanoski ('87)	0	0	White production workers (SBR).
Matanoski ('87)	530	1	Black production workers (SBR).
Downs ('86)	*235	8	Total (BD).
Downs ('86) ^b	282	4	Routine production workers (BD).

* These data come from the three year update.

^b Includes ICD-7 Nos. 200 (LSC/RCS), 202 (Other), 203 (MMY), 208 (PV), and 209 (MF).

NR: Not Reported.

* p less than 0.05 two-sided test.

** p less than 0.01 two-sided test.

(d) *Other LHC*. As shown in Table 16, Matanoski observed a significant excess of "other LHC" (ICDA-8, "other", MMY, PV) among all production workers

(SMR=260, Obs=9). Andjelkovic reported a significant excess for "other LHC" [ICD-8, other, PV, and MF (SMR=192, Obs=10)] among the total

cohort of workers. Downs reported an elevated SMR of 124 (Obs=4) for "other LHC" (ICD-8, other, MMY, and PV) among workers in the total cohort.

TABLE 16.—STANDARDIZED MORTALITY RATIOS AND OBSERVED DEATHS FOR OTHER CANCERS OF THE LYMPHOHEMATOPOIETIC SYSTEM BY STUDY

Author (year)	SMR	Observed deaths	Cohort
Andjelkovic ('76)	**192	10	Total (general/SBR).
McMichael ('74)	NR	NR	Total (general/SBR).
McMichael ('76)	NR	NR	Synthetic latex department (SBR).
Meinhardt ('82)	0	0	Total Plant A (SBR).
Meinhardt ('82)	0	0	War Plant A (SBR).

TABLE 16.—STANDARDIZED MORTALITY RATIOS AND OBSERVED DEATHS FOR OTHER CANCERS OF THE LYMPHOHEMATOPOIETIC SYSTEM BY STUDY—Continued

Author (year)	SMR	Observed deaths	Cohort
Matanoski ('87) ^b	111	17	Total (SBR).
Matanoski ('87) ^b	*260	9	Total production workers (SBR).
Matanoski ('87) ^b	230	7	White production workers (SBR).
Matanoski ('87) ^b	480	2	Black production workers (SBR).
Downs ('86) ^b	124	4	Total (BD).
Downs ('86) ^c	282	4	Routine production workers (BD).

NR Not reported.

* p less than 0.05 two-sided test.

^b Includes: other lymphoma, polycythemia vera, myelofibrosis.^c ICDA-8 Nos. not given for the category "other".^d Includes: MMY, LSC/RCS, other, NHL, PV, and MF.

(v) *Summary.* The observation of a qualitative dose-response between BD and lymphohematopoietic cancer (LHC), with data from the Downs and Matanoski studies, may not exclude the possibility that other exposures in the plants were associated with elevated SMRs for LHC. Since the dose-response relationship exists between LHC and BD, these other exposures would have to be associated with and parallel to BD exposures in order to be associated with increases in LHC. That is, these other exposures would have to increase and decrease over time in the same way that BD exposures changed. Since exposures to other substances would differ between SBR and BD production workplaces, the presence of other exposures is less likely to explain the dose-response for BD production workers where exposures are primarily due to BD. Thus, it is OSHA's opinion that BD exposure is the most likely factor associated with the qualitative dose-response relationship in these two studies.

Results from three other epidemiologic studies evaluated by OSHA are consistent with the results from Downs and Matanoski. A dose-response relationship was demonstrated for BD exposure and LHC and leukemia in the McMichael study, using ratio-of-exposure-rates. In the Meinhardt study, SMRs for all LHC and leukemia were significantly elevated among workers who had the highest relative exposures, in terms of process changes (hot batch versus cold process). This, plus the observation of elevated SMRs for leukemia and other LHC cancer in Andjelkovic's study, is consistent with the study results of Downs, Matanoski, and McMichael.

On the basis of the consistency of results from the five epidemiologic studies evaluated, OSHA is of the opinion that exposure to BD is associated with an increased risk of death from cancer of the

lymphohematopoietic system. The epidemiologic findings supplement the findings from the animal studies that demonstrate a dose-response for multiple tumors and particularly for lymphomas in mice exposed to BD.

C. Reproductive Effects

Although there are no data on the potential reproductive or developmental effects of BD exposure in humans, there are several relevant studies in animals. The earliest study, conducted by Carpenter *et al.* (Ex. 23-64) in 1944, found evidence of maternal toxicity in rats consisting of decreased litter size when the rats were exposed to BD at 2,300 or 6,700 ppm. No effects were reported when exposures were 600 ppm. This limited information is now augmented by several recent studies conducted in rats and mice.

In 1981, the IISRP sponsored a study of the teratogenic effects of BD in Sprague-Dawley rats (Ex. 2-32). In this study, conducted by Hazleton Laboratories Europe Ltd., groups of 24 pregnant rats were exposed to BD for 6 hours/day at airborne concentrations of 200 ppm, 1,000 ppm, or 8,000 ppm on days 6 through 15 of gestation. Negative controls consisted of 40 pregnant rats maintained in filtered air; positive controls were exposed to acetylsalicylic acid by gavage. The mated rats were killed by cervical dislocation on day 20 of gestation, dissected, and examined macroscopically. Live fetuses were killed by intracardiac injection of pentobarbitone sodium solution. Each fetus was weighed, measured and its exterior was examined. Two-thirds were dissected and the viscera examined; tissue was cleared and the skeletons examined for abnormalities. The remaining fetuses were sectioned and examined for abnormalities.

There was a dose-related effect of BD exposure on maternal body weight gain with an actual loss of weight in the first few days. Postimplantation loss was slightly higher in all BD-exposed groups.

There was also a dose-response effect of BD exposure on mean fetal weight and crown-to-rump length. Post implantation losses and growth retardation were thought by the author to be related to the reductions in body weight gain experienced by the dams.

The incidence of minor external and visceral defects was higher in the litters exposed to BD than in the negative control animals. Significant increases in hematoma incidence occurred in the fetuses in the 200 and 1,000 ppm groups; the 8,000 ppm group had a significantly increased number of fetuses with lens opacities. Two fetuses in the 8,000 ppm group had rare or life-threatening cardiovascular abnormalities and one also showed abnormal facial shape, subcutaneous edema, sunken eyes, and undescended testicles.

The incidence of litters with fetuses showing skeletal variants was significantly higher than controls in the 8,000 ppm group. There was also a significantly higher incidence of bipartite thoracic centra in all BD-exposed groups and a significantly elevated incidence of incomplete ossification of the sternum in the highest exposure group compared to negative control animals. This 8,000 ppm group also had a significantly higher incidence of irregular ossification of the ribs. BD-exposed fetuses had a higher incidence of life-threatening or rare skeletal defects. The majority of these major skeletal defects were wavy ribs, and the incidence of fetuses with wavy ribs was statistically higher than in controls in the 8,000 ppm group. This group also exhibited other major skeletal defects including abnormalities of the skull, spine, long bones, and ribs.

The author concluded that any evidence of teratogenicity at the two lower doses was equivocal; the effects could also be attributed to a combination of maternal toxicities and differences in behavior of this group of

animals from historical controls. The authors concluded, however:

At the highest dosage, even discounting the wavy ribs, there was still a higher incidence of major foetal defects than in the control group. This, therefore, should be regarded as an effect of BD exposure at 8,000 ppm v/v on embryonic development.

At the "International Symposium on the Toxicology, Carcinogenesis, and Human Health Aspects of 1,3-Butadiene," held at Research Triangle Park, North Carolina, on April 12-13, 1988, Morrissey described the results of research on reproductive and developmental toxicity studies of BD in rodents (Ex. 23-71). (See also Exs. 23-72, 23-73, 23-74, 23-75). Pregnant Sprague-Dawley rats (24-28 per group) and Swiss (CD-1) mice (18 to 22 per group) were exposed to BD 6 hours/day at 0 ppm, 40 ppm, 200 ppm, or 1,000 ppm from days 6 through 15 of gestation. The animals were weighed and observed for signs of toxicity. One day before expected delivery, they were killed and the numbers of implantation sites, resorptions, and live and dead fetuses were tabulated. Fetuses were weighed and subjected to external, visceral, and skeletal examinations (Exs. 23-71, 23-72, 23-73).

In the rats, there was evidence of maternal toxicity only in the 1,000 ppm group; i.e. depressed body weight gains during the first 5 days of exposure. The percentage of pregnant animals and the number of litters with live fetuses were unaffected by treatment. Placental weights, fetal body weights, and sex ratios were unaffected by treatment. There were no significant differences among groups in incidence of fetal malformations. The investigators concluded that "under the conditions of this exposure regimen, there was no evidence for a teratogenic response to BD exposure" (Ex. 23-73, p. vi).

In mice, significant concentration-related decreases were detected in weight gains during the last 5 days of exposure and from the end of exposure to sacrifice, body weight at sacrifice, extragastric weight and weight gain, and weight of the gravid uterus. There was a significant concentration-related depression of fetal body weights and placental weights.

Body weights of male fetuses were significantly lower than those of control fetuses at all concentrations; in the female mice, significant depression of weights occurred only at 200 and 1,000 ppm. Weights of placentas of male fetuses were significantly decreased in the 200 ppm and 1,000 ppm exposure group; placentas of female fetuses were affected significantly only at 1,000 ppm.

There were no significant differences among groups in the incidences of malformations. However, incidences of supernumerary ribs and reduced ossification were significantly increased in litters of mice exposed to BD at 200 and 1,000 ppm.

This exposure regimen clearly produced signs of maternal toxicity in mice exposed at 200 ppm and 1,000 ppm. Fetal growth retardation and increased incidences of morphologic variations were also observed to occur in a concentration-related manner. These results indicated to the authors "that the fetus [may] be more susceptible than the dam" (Ex. 23-72, p. vi), but "no evidence of teratogenicity was found."

To examine the effects of inhalation of BD on the reproductive system, the investigators conducted sperm head morphology tests with B6C3F₁ mice and a dominant lethal study using Swiss (CD-1) mice (Ex. 23-71). In both studies, groups of 20 mice were exposed to BD for 6 hours/day for 5 consecutive days at concentrations of 0 ppm, 200 ppm, 1,000 ppm, or 5,000 ppm.

In the sperm head morphology study, the mice were killed in the fifth postexposure week and examined for gross lesions of the reproductive tract (Ex. 23-75). Suspensions of the epididymal sperm were prepared for morphologic evaluation. Although signs of toxicity were mild and transient and occurred only in the highest exposure group, there was a concentration-related increase in the incidence of sperm head abnormalities. The percentage of sperm heads morphologically abnormal was significantly increased in the mice exposed at 1,000 and 5,000 ppm. Since the assay was conducted only during the fifth post-exposure week, it was not designed to detect effects at all stages of gamete development, leading the authors to conclude that "at least the late spermatogonia or early primary spermatocytes may be sensitive to alteration by exposures of mice to 1,000 ppm or higher concentrations of BD" (Ex. 23-75, p. v).

In the study of dominant lethality, male CD-1 mice were exposed to BD at 0 ppm, 200 ppm, 1,000 ppm, and 5,000 ppm for 6 hours/day for 5 consecutive days (Ex. 23-74). Body weights and signs of toxicity were observed in the males throughout the study. The only evidence of toxicity was transient, occurring over a 20 to 30 minute period following exposure at 5,000 ppm.

Subsequent to exposure, each male was mated with two unexposed females for 1 week. Mating was continued for 8 weeks with replacement of the females each week. The females were killed 12 days after their removal to evaluate

their reproductive status. Gravid uteri were removed for determination of the number, position, and status of implantations.

Females mated to the BD-exposed males during the first 2 weeks post exposure were described as more likely than control animals to have increased numbers of dead implantations per pregnancy. The percentage of dead implantations in litters sired by males exposed at 1,000 ppm was significantly higher than controls for weeks 1 and 2; the numbers of dead implantations per pregnancy in litters sired by males exposed at 200 ppm and mated during the second post exposure week were also significantly increased. The percentage of females with two or more dead implantations was significantly higher than the control value for the first mating for all three exposure groups. These results suggested to the authors that the more mature cells (spermatozoa and spermatids) may be altered by exposure to BD (Ex. 23-74).

In the first NTP bioassay, previously described, B6C3F₁ mice were exposed to BD for 60 or 61 weeks. An increased incidence of testicular atrophy was observed in the males (none in controls, 40% in the 625 ppm group, 20% at 1,250 ppm). Female mice had an increased incidence of ovarian atrophy and uterine involution (2/49 in controls, 40/45 at 625 ppm, and 40/48 at 1,250 ppm and 0/40 in controls, 7/46 at 625 ppm, and 14/49 at 1,250 ppm, respectively).

These results are being confirmed in the second NTP study which was described by Melnick *et al.* (Ex. 23-59). After 65 weeks of a study intended to continue a full two years, B6C3F₁ mice exposed to BD at 0, 6.25, 20, 62.5, 200, or 625 ppm for 6 hours/day, 5 days/week demonstrated an increased incidence of testicular atrophy at 625 ppm and ovarian atrophy at all doses of 20 ppm or greater. The animals examined consisted of those sacrificed at 40 and 60 weeks and those that had already died, either from BD-related causes, mainly lymphocytic lymphoma, or from unrelated causes.

The cancer bioassays provided other indicators that chronic inhalation of BD alters the reproductive system (Ex. 23-71). In the rat study, described previously, there was an increased incidence of a number of tumors of the reproductive tract, including Leydig cell tumors of the testes and uterine/vaginal stromal tumors. The NTP-sponsored study, in which mice were exposed to BD at 625 ppm and 1,250 ppm, was terminated early because of high mortality associated with neoplasms at

multiple sites, including ovarian granulosa cell tumors.

In its Current Intelligence Bulletin, NIOSH concluded (Ex. 22-17):

*** there is a possible reproductive hazard to workers exposed to BD based on maternal and fetal toxicity observed in BD exposed rats; an indication of teratogenicity in exposed rats, and suggestion of testicular and ovarian atrophy in mice exposed to BD.

OSHA agrees with these conclusions; in fact, evidence from sperm morphology tests and dominant lethal assays coupled with confirmation of the results of the first NTP study of the carcinogenicity of BD strengthen these conclusions. The effects appear in the male and the female rodents as well as in the fetus. Indeed, the lowest concentration presently known to produce an effect in the adult rodent is 20 ppm. In contrast, no evidence of any teratogenic effects has been seen at concentrations below 8,000 ppm, even though two species have been tested. Thus, the adult rodent's reproductive functioning may be at much greater risk than in utero risks to the fetus.

D. Other Relevant Biological Data

Additional information that assisted OSHA in developing a standard for BD is presented below, including acute hazards and summaries of studies of the distribution and metabolism of BD, the genotoxic effects of BD, the genotoxic and carcinogenic effects of BD metabolites and their structural analogues, and other data indicating that BD can influence hematologic parameters, either directly or as a consequence of its toxicity to the bone marrow.

1. Acute Hazards

To determine if a chemical has effects that pose an acute health hazard, as a minimum, OSHA examines irritation, corrosivity, sensitization, and lethal dose.

At very high concentrations, BD produces narcosis with central nervous system depression and respiratory paralysis (Ex. 2-11). LC_{50} values (the concentration that produces death in 50 percent of the animals exposed) were reported to be 122,170 ppm (12.2% v/v) in mice exposed for 2 hours and 129,000 ppm (12.9% v/v) in rats exposed for 4 hours (Exs. 2-11, 23-91). These concentrations would present an explosion hazard, thus limiting the likelihood that humans would risk any such exposure except in an extreme emergency. Oral LD_{50} values (oral dose that results in death of 50 percent of the animals) of 5.5 g/kg body weight for rats and 3.2 g/kg body weight for mice have been reported (Ex. 23-31). These lethal

effects occur at such high doses that BD would not be considered "toxic" for purposes of Appendix A of OSHA's Hazard Communication Standard (29 CFR 1910.1200) which describes a classification scheme for acute toxicity based on lethality data.

At concentrations slightly above the existing standard of 1,000 ppm, BD is a sensory irritant. Concentrations of several thousand parts per million were reported to cause irritation to the skin, eyes, nose, and throat (Exs. 23-64, 23-94). Two human subjects exposed to BD for 8 hours at 8,000 ppm reported eye irritation, blurred vision, coughing and drowsiness (Ex. 23-64).

2. Systemic Effects

Identification of the tissues and organ systems that may be adversely affected by exposure to a toxic chemical is important for two reasons: (1) The effects resulting from the systemic toxicity may be sufficiently severe that they must be prevented to protect worker health, and (2) the target organs and doses identified in subacute and subchronic range finding tests provide important information for the design of cancer bioassays. The section below explores the information available that indicates potential target organs for BD.

As noted by IARC (1986) in that agency's review of the toxicity of BD (Ex. 23-31), several studies from the U.S.S.R. have ascribed various adverse effects to occupational exposure to BD. The effects reported include hematologic disorders, liver enlargement and liver and bile-duct diseases, kidney malfunctions, laryngotracheitis, upper respiratory tract irritation, conjunctivitis, gastritis, various skin disorders and a variety of neuroaesthetic symptoms. Few are substantiated by details on the atmospheric concentration or duration of exposure, and control data were not generally provided (Ex. 23-31), greatly limiting the usefulness of the studies for standards-setting purposes. Except for sensory irritant effects and hematologic changes, evidence from studies of U.S. workers do not corroborate the Russian studies. In animal studies, described below, the kidney and liver were affected by BD, but only at doses that also produced a large number of cancers.

For example, Hazleton Laboratories performed a 3-month subchronic study of BD exposure in Sprague Dawley rats (Ex. 2-11). Five groups of rats were exposed to BD at concentrations of 0, 1,000, 2,000, 4,000 and 8,000 ppm 6 hr/day, 5 days/week for 13 weeks. Forty male and forty female animals were included in each group, with 10 of each sex being killed at weeks 2 and 6 of the

study. The authors reported that "no untoward effects attributable to exposure were observed, except a moderately increased salivation *** at higher concentrations of butadiene" (Ex. 2-11). The authors also found no treatment-related changes in growth rate, food consumption, hematological and blood biochemical parameters, or from urine analysis. There was no evidence of macroscopic or histopathologic changes in the tissues or organs examined. An increase in erythrocyte cholinesterase activity in the exposed animals was not considered an adverse effect by the authors.

In addition to the subchronic study, the Hazleton Laboratory group examined the rats exposed to BD in their 2-year cancer bioassay (described earlier) for other signs of toxicity. Studies included: hematological analysis, tests of neuromuscular function, and histologic examination of post-mortem tissues and organs (Exs. 2-31, 23-84). The only finding in the hematological examination that the authors attributed to BD was higher leukocyte counts in the high dose (8,000 ppm) females during the first year; the authors did not consider this toxicologically significant. As the experiment progressed, BD-exposed animals tended to be less able to remain on a rotating cone, test results which might indicate an adverse change in neuromuscular function. However, the results may have been influenced by the presence of mammary masses which made the test more difficult for affected animals to complete.

Kidney weight was increased in the high dose males, and the authors reported that kidney damage was the major cause of an increased death rate observed during the second year of the experiment. Liver weights at both doses (1,000 and 8,000 ppm) were increased, but associated pathological changes were not found upon microscopic examination of the tissue. As noted by the EPA (Ex. 17-21, p. 3-3), this could be indicative of BD-induced liver enzyme changes.

In the NTP bioassay, B6C3F₁ mice exposed to BD at 625 or 1,250 ppm 6 hr/day, 5 days/week for 61 weeks (see section on carcinogenicity) showed atrophy of the ovary and testes, atrophy and metaplasia of the nasal and respiratory epithelium, hyperplasia of the forestomach epithelium, and liver necrosis (Exs. 23-1, 23-92). The nasal cavity changes are of interest since an epoxide, 1,2-epoxybutane, with a structure closely related to a BD metabolite, epoxybutene, caused similar

changes when tested by inhalation in another NTP bioassay (Ex. 23-85).

3. Bone Marrow Toxicity

Epidemiologic studies of the styrene-butadiene rubber (SBR) industry suggest that workers exposed to BD are at increased risk of developing leukemia or lymphoma, two forms of hematologic malignancy (see section on epidemiology). Consequently, investigators have looked for evidence of hematopoietic toxicity resulting from BD exposure in animals and in workers. For example, Irons *et al.* of CIIT found that exposure of male B6C3F₁ mice to 1,250 ppm of BD for 6-24 weeks resulted in macrocytic-megaloblastic anemia, an increase in erythrocyte micronuclei and leukopenia, principally due to neutropenia. Bone marrow cell types overall were not altered, but there was an increase in the number of cells in the bone marrow of exposed mice due to an increase in DNA synthesis (Ex. 23-12).

Melnick *et al.* (Ex. 23-59) of the NTP are exposing B6C3F₁ mice to BD for 6 hours/day, 5 days/week at concentrations of 0, 6.25, 20, 62.5, 200, and 625 ppm in an ongoing study of the carcinogenic effects of BD. These investigators simultaneously are looking for evidence of effects on the reticuloendothelial system. Interim sacrifices conducted at 40 and 60 weeks into the investigation, for example, included examination of hematologic parameters. Exposure to BD, so far, has caused a poorly regenerative anemia at concentrations of 62.5 ppm or above.

The results from the Melnick study are confirmed and extended by a series of studies conducted by Irons and co-workers at the CIIT. For example, Irons (Ex. 23-59) observed that chronic exposure of B6C3F₁ mice to 1,250 ppm of BD, 6 hours/day, 5 days/week for 12 or 52 weeks resulted in a 21 percent and 57 percent incidence of thymic lymphoma/leukemia, respectively. Leukemogenesis was preceded by anemia and bone marrow cytogenetic abnormalities. NIH Swiss mice were also exposed to BD for 52 weeks, and 14 percent of these animals developed thymic lymphoma/leukemia; hematologic and cytogenetic abnormalities were reported as being "indistinguishable from those encountered in B6C3F₁ mice".

Alterations in hematopoietic stem cells in the bone marrow of B6C3F₁ mice exposed to BD have also been seen in the CIIT studies. Assays of long-term bone marrow cultures of exposed mice showed decreased granulocyte macrophage precursor cells after 14 days but increases in numbers after 28 days, indicative of a shift in maturation or delay in differentiation (Ex. 23-13).

Based primarily on the studies of mice, the bone marrow appears to be one of the targets of BD toxicity. The mechanism of toxicity is not certain but Irons has hypothesized that it may be interference with normal bone marrow cell differentiation and/or DNA synthesis (Ex. 23-12).

The results in humans exposed to BD in the course of their work are consistent with the evidence in mice, but unlike the animal studies, the human evidence is insufficient to definitively conclude that there is bone marrow toxicity demonstrated from BD exposure. Checkoway and Williams (Ex. 2-28) examined 163 hourly production workers who were employed at the SBR facility studied by McMichael *et al.* (Ex. 23-4). At the time of the Checkoway and Williams survey, the plant was manufacturing hot and cold styrene-butadiene rubber and, to a lesser extent, vinyl pyridine latex and carboxylated rubber.

Questionnaires eliciting medical histories of acute and chronic infections, malignant disease, anemia, allergies, vaccinations, radiation, and medication use were administered and blood samples were drawn. One of the 163 men reported a history of leukemia, and he was excluded from further study.

Exposure to BD, styrene, benzene, and toluene was measured in all areas of the plant. BD and styrene concentrations, 20 (0.5-65) ppm and 13.7 (0.14-53) ppm, respectively, were considerably higher in the Tank Farm than in other departments. In contrast, benzene exposures, averaging 0.03 ppm, and toluene concentrations, averaging 0.53 ppm, were low in the Tank Farm. Consequently, the authors compared the hematologic profiles of Tank Farm workers ($n=8$) with those of the other workers examined.

The investigation focused on two potential effects, bone marrow depression and cellular immaturity. Bone marrow depression was suspected if there were lower levels of erythrocytes, hemoglobin, neutrophils, and platelets. Cellular immaturity was suggested by increases in reticulocyte and neutrophil band form values.

Although the differences were small, hematologic parameters, adjusted for age and medical status, in the Tank Farm workers differed from those of the other workers. Except for total leukocyte count, the hematologic profiles of the Tank Farm workers were consistent with an indication of bone marrow depression. The Tank Farm workers also had increases in band neutrophils, a possible sign of cellular immaturity, but no evidence that increased

destruction of reticulocytes was the cause.

While admitting the limitations of the cross-sectional design of the study, the authors felt, nevertheless, that their results were "suggestive of possible biological effects, the ultimate clinical consequences of which are not readily apparent." OSHA finds any evidence of hematological changes in workers exposed at BD levels well below the existing permissible limit of 1,000 ppm to be of interest since such information suggests the inadequacy of the PEL. However, the study involves only 8 workers with relatively high levels of exposure to BD and low levels of exposure to benzene, so it is quite insensitive to minor changes in hematologic parameters.

In a review of BD published in 1986 by IARC, the Working Group felt the study of Checkoway and Williams could not be considered indicative of an effect of BD on the bone marrow (Ex. 2-28). In light of the more recent animal studies that were not available to IARC, however, OSHA believes that the bone marrow is a target of BD toxicity. Furthermore, the fact that changes in hematologic parameters could be distinguished in workers exposed to BD at 20 ppm indicates that such measurements are a sensitive indicator of excessive exposure to BD.

Some investigators believe that lymphomas in mice are of a viral origin, and they question the relevance of mouse lymphoma to human cancer (Ex. 23-70, p. 55). Two separate strains of mice, however, have developed lymphoma/leukemia following BD exposure, and the cancers were preceded by hematologic and cytogenetic abnormalities. Hematologic changes are also characteristic in cases of human leukemia, although lymphoma may not provide such an indicator. The extent to which hematologic changes in humans exposed to BD may be associated with leukemia is not known. However, the combined information in mice and humans suggests that changes in hematologic parameters should be considered a toxic endpoint that can result from BD exposure.

4. Metabolism

According to the classical electrophilic theory of carcinogenesis developed by Miller and Miller, organic chemicals require metabolic activation to exert their cancer-inducing properties. Although the original molecule is relatively or completely inactive, various metabolites have greater carcinogenic activity; these metabolites are termed the proximate and ultimate

carcinogens. Ultimate carcinogens are electrophilic (electron deficient) reactants that bind with target intracellular nucleophilic (electron-rich) macromolecules such as DNA and proteins. The enzymes usually involved in the biotransformation of a chemical to carcinogenically active metabolites, and the microsomal mixed function oxidases, are part of the same mechanism responsible for detoxification of drugs (Ex. 23-70, p. 12).

The reactive metabolites may also bind with other nucleophiles such as glutathione or water. Through these latter processes, the effects of agents can be neutralized by forming less biologically reactive metabolites that are very polar and more easily excreted. The efficiency of this neutralization is an important factor in tumor induction (Ex. 23-70, p. 12). As described below, BD's metabolic reactions fit this classical description of the activation and detoxification steps in carcinogenesis.

Although every organic carcinogen cannot be described by the electrophilic

theory of carcinogenesis, evidence that a chemical, such as BD, has properties consistent with this theory adds to OSHA's confidence that the substance is properly classified as to its carcinogenic potential. Such evidence would include: the identification of reactive metabolites, information that these metabolites possess mutagenic or carcinogenic activity, information that close structural analogues possess similar genotoxic properties, and studies showing that identified metabolites are capable of binding to DNA. These topics are explored in the sections below beginning with information on metabolic pathways for BD and the implications for human health protection.

Based on the electrophilic theory of chemical carcinogenesis, scientists predict that certain structural units present in a molecule will make it likely that the molecule will be a carcinogen when tested in animals. Aliphatic and aromatic epoxides are one of these structural classes. As described below, several BD metabolites are aliphatic epoxides suggesting a mechanism of

action to explain BD's carcinogenic activity.

In vitro studies indicate that BD is converted to epoxybutene (vinyl oxirane) by mixed function oxidases in rat liver microsomes. Pretreatment of rats with phenobarbital increases enzyme activity. Epoxybutene undergoes further conversion to 1,2:3,4-diepoxybutane and 3-butene-1,2 diol; the latter product is converted by mixed function oxidases to 3,4-epoxy-1,2-butanediol.

Because of their genotoxic properties (see section on mutagenicity), the two epoxides, epoxybutene and 1,2:3,4-diepoxybutane, which have been identified from *in vitro* studies, are suspected of being the ultimate carcinogens that account for the carcinogenic properties of BD. A metabolic pathway suggested for BD, based on *in vitro* studies, is presented in Figure 1.

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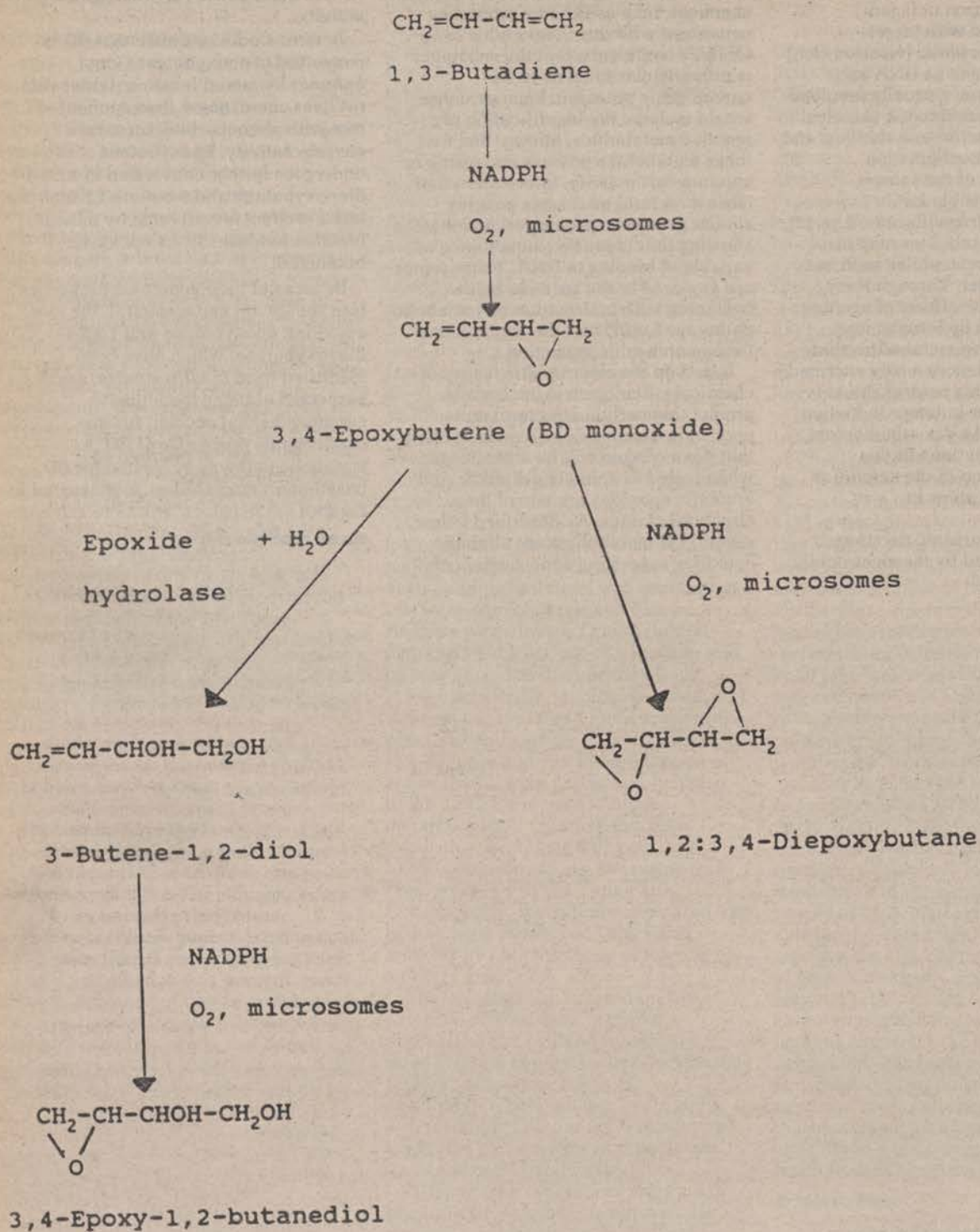


Figure 1. Possible Metabolic Pathway for BD (Ex.23-60).

Epoxybutene also reacts both chemically and enzymatically with glutathione-S-transferase to form a glutathione conjugate (Malvoisin and Roberfroid, 1982). According to the EPA, the significance of this observation with respect to the toxicity of epoxybutene awaits further investigation (Ex. 17-21, p. 4-3). Generally, however, glutathione conjugation is a detoxification process that enhances the excretion of toxic chemicals.

Intact animals are also known to metabolize BD to epoxybutene. In the closed-chamber method, a fixed amount of test chemical is placed in the chamber, and the concentration of this chemical is measured over time. A decline in concentration indicates that there has been uptake and metabolism of the test chemical by the animal. Exhaled metabolites can also be identified using the closed chamber method (Ex. 17-21, pp. 4-4 to 4-8).

Using the closed-system technique, investigators led by Bolt (Exs. 23-95, 23-96) found that exposure of rats to BD at concentrations exceeding 1,000 ppm led to a constant accumulation of epoxybutene. When concentrations of BD were 1,000 ppm or less, the concentration of epoxybutene declined in approximately first-order fashion, suggesting that epoxybutene was reabsorbed and further metabolized.

Comparative studies on species differences in the disposition of inhaled BD have also been conducted by the closed chamber method and using nose-only exposure to constant atmospheric concentrations of BD. These studies were initiated to determine if there were differences in the uptake and distribution of inhaled BD between rats and mice that were consistent with the differences in species susceptibility to cancer developed as a result of BD exposure.

For example, Kreiling *et al.* (Ex. 23-98) conducted closed chamber experiments in B6C3F₁ mice. Comparing their results to those calculated for Sprague-Dawley rats by Bolt *et al.*, Kreiling *et al.* concluded that the rate of metabolism of BD in mice was approximately twice that in rats.

In a different type of test where the chamber concentration is held constant, Bond *et al.* (Ex. 23-86) exposed rats and mice to BD for 6 hours in a nose-only device. Concentrations were 0.14 µg/l (0.08 ppm) to 1,870 µg/l (842 ppm) for mice or 0.14 µg/l (0.08 ppm) to 12,700 µg/l (5,715 ppm) for rats. One group of 4 to 6 animals was killed at the end of exposure to determine the total amount of radioactivity retained in the body. A second group of four animals was

retained in metabolism cages for up to 70 hours after exposure to determine radioactivity in urine, feces, and expired air. Rats and mice from the third group of nine animals were euthanized at various times throughout the exposure period to determine the presence of BD and its metabolites in blood.

The amount of ¹⁴C retained at 6 hours ranged from 1.5 (5,715 ppm) to 17 percent (0.8 ppm) in rats and 4 (842 ppm) to 20 percent (6.4 ppm or less) in mice. There was a significant (*p* less than 0.001) concentration-related decrease in the percentage of inhaled BD retained with increasing exposure concentration for both rats and mice. When the total amount of ¹⁴C retained at 6 hours was normalized to body weight or body surface area, mice accumulated a larger amount of radioactivity than rats exposed at the same concentration.

Urine and exhaled air were major routes of excretion of ¹⁴C in both rats and mice. At low concentrations (6.4 ppm), all ¹⁴C exhaled by mice was accounted for as metabolites; at 65 ppm and above, BD was also present. In rats, there was a shift in the main route of excretion from urine at 60 ppm to exhaled air at 5,715 ppm.

Overall, greater than 90 percent of the ¹⁴C in the blood of the rats and mice consisted of BD metabolites, mostly nonvolatile materials. At 65 and 842 ppm, mice had nearly twice the concentrations of 1,2-epoxy-3-butene in the blood as rats exposed at similar concentrations.

It is of interest that any epoxide intermediates were found in the blood and exhaled air. This indicates that these reactive molecules are sufficiently stable to be available to interact with critical macromolecules.

The findings in this study suggest several reasons why species differences have been seen in the carcinogenicity studies. First, over a wide range (0.08 to 842 ppm), mice received a larger amount of inhaled BD per unit of body weight than rats. Second, mice had significantly higher concentrations of 1,2-epoxy-3-butene in the blood than rats; to the extent that this metabolite is the ultimate carcinogen, the mice would be at greater risk of developing cancer.

Bond *et al.* (Ex. 23-87) conducted further studies to determine if there were differences between rats and mice in the distribution of BD in tissues following inhalation exposure. Male Sprague Dawley rats were exposed to BD at 549 ppm and mice were exposed at 54 ppm. These concentrations were selected because they were known to result in retention of similar amounts of BD and metabolites.

Radioactivity was distributed widely in tissues immediately following exposure of both rats and mice. Blood concentrations of ¹⁴C were low compared to other tissues in both rats and mice. In all cases, tissues of mice contained higher concentrations of ¹⁴C per umole of BD inhaled than did rats; in most cases mouse tissue contained 15 to 100 times that of rat tissue. In rats, all tissues examined contained a substantial amount of nonvolatile BD metabolite. Similar results were found in mouse liver, the only mouse tissue available for analysis. This study indicated that: (1) BD or its metabolites is widely distributed in the tissues following exposure and the tissues of mice contain higher concentrations of these materials than rats. These findings are consistent with the evidence that BD can cause cancer at multiple sites in experimental animals.

The studies of the metabolism and distribution of BD provide a wealth of information consistent with a conclusion that BD should be regarded as an occupational carcinogen. In laboratory animals (and thus presumably in humans) BD is readily absorbed through inhalation and is distributed widely throughout the body (Ex. 17-21). To some extent, this widespread distribution would be necessary to account for the numerous sites where cancers were induced in animals. However, cancer is not induced at all of the sites where BD is retained. This finding is completely consistent with the electrophilic theory of carcinogenesis which would take the position that the parent compound, BD, is not the reactive chemical. According to this theory of carcinogenesis, cancer would occur only at the organ sites where the ultimate carcinogen, a reactive epoxide, is formed.

The finding that the mouse's target organs are exposed to a greater concentration of the reactive epoxides that probably are responsible for BD's carcinogenic activity also helps to explain apparent species differences in cancer incidence. (There are however, substantial differences between the protocols used in the studies of mice and rats, and early mortality from lymphoma further confounds the results in mice). In terms of concluding that the rodent studies are relevant to humans, however, the most interesting fact is that while there are species differences in the amount of BD at the target sites, both the rat and the mouse metabolized BD to the same reactive metabolites suspected of being the ultimate carcinogens.

5. Structure Activity

Although OSHA relied primarily on the animal bioassay data and human epidemiologic studies to reach its conclusions regarding the carcinogenicity of BD, in addition to this direct evidence, tests of structurally related chemicals support OSHA's conclusions.

Several metabolites or structurally related chemicals have been tested in whole animal bioassays. For example, the metabolite diepoxybutane (D.L. and meso forms) produced skin tumors in mice when administered by application to the skin. The D.L. racemate also produced local sarcomas in mice and rats by subcutaneous injection. L-1,2,3,4-Diepoxybutane was also carcinogenic in mice by intraperitoneal injection (Ex. 23-88). This information has led IARC to list diepoxybutane as a category 2B animal carcinogen (Ex. 23-89).

4-Vinylcyclohexene, the dimer of BD was tested in the NTP bioassay program by oral gavage. The studies in rats and in male mice were considered inadequate due to extensive and early mortality, but in female mice, vinylcyclohexene was associated with a markedly increased incidence of uncommon ovarian neoplasms (Ex. 23-90). Based primarily on this information IARC (Ex. 23-31) concluded that there is limited evidence for the carcinogenicity of 4-vinylcyclohexene to experimental animals.

Epoxybutane, which is structurally closely related to a suspected toxic metabolite of BD, epoxybutene, has also been tested for carcinogenicity in rodents by the NTP. This study found clear evidence of carcinogenicity in male F344 rats, with increased incidences of papillary adenomas of the nasal cavity, alveolar/bronchiolar carcinomas, and alveolar/bronchiolar adenomas or carcinomas (combined). Equivocal evidence of carcinogenic activity was found in female F344 rats. These animals developed papillary adenomas of the nasal cavity. In B6C3F₁ mice, there were nonneoplastic changes of the nasal cavity (Ex. 23-85).

In conclusion, the limited evidence that exists on the carcinogenic activity of suspected reactive metabolites and structurally related chemicals is completely consistent with the electrophilic theory of carcinogenesis as the mechanism of action for BD.

6. *Genotoxicity*: Short-term tests, such as assays for point mutations, chromosomal aberrations, DNA damage, and *in vitro* transformations are useful to screen for potential carcinogens, to reach a judgment on the carcinogenicity of a chemical, and to provide

information on carcinogenic mechanisms (Ex. 23-70). The information presented below is concerned with the mutagenicity of BD, but it also includes a discussion of the mutagenicity of the reactive metabolites, 3,4-epoxybutene, and 1,2,3,4-diepoxybutane. The available evidence suggests that BD is mutagenic by virtue of its metabolism to mutagenic intermediates, adding further support to the conclusions drawn about BD's carcinogenic activity from the metabolism data and the information on structure activity relationships.

The system in which the greatest number of chemicals have been evaluated is the *Salmonella* microsome test where strains of genetically altered bacteria provide increased sensitivity to potential mutagens. Other microbial systems are also used to measure the capability of a chemical to interact with DNA to give rise to a mutagenic event.

BD at concentrations of 4-32 percent was mutagenic to *Salmonella typhimurium* TA1530 in the presence of a metabolic system (S9) from the livers of Arochlor- or phenobarbital-induced rats (Ex. 23-97). Although BD had previously been reported to be mutagenic to strain TA 1539 and TA 1535 in the absence of S9, this activity was subsequently attributed to cross-contamination by volatile mutagenic metabolites formed on plates containing S9 (Exs. 23-31, 23-99). This information indicates that BD is a base-pair promutagen in bacteria (Exs. 17-21, 23-71).

The mutagenic effects of BD have been examined in laboratory animals. No effects were observed in the bone marrow of rats exposed to BD gas at 100 ppm to 10,000 ppm for 6 hours/day for 2 days. In similarly exposed mice, however, there was a dose-dependent increase in bone marrow micronucleated cells and sister chromatid exchanges. Mice exposed to BD at 6.25 ppm to 625 ppm 6 hours/day for 10 days showed a significant increase in the frequencies of chromosomal aberrations and sister chromatid exchanges, a lengthening of the average generation time, and significant depression of the mitotic index in the bone marrow. In peripheral blood, there was a significant increase of micronucleated cell induction in polychromatic erythrocytes and in normochromatic erythrocytes (Ex. 23-71).

When male Wistar rats or B6C3F₁ mice inhaled radiolabeled BD, comparable amounts of ¹⁴C radioactivity were found in the total liver DNA. The covalent binding of radioactivity to liver nucleoproteins of mice was about two

times that in rats. The formation rate of reactive protein-binding metabolites was thus more important in the mouse, paralleling the higher metabolic rate in this species (Ex. 23-61).

The mutagenicity of BD has been attributed to two oxidative metabolites, epoxybutene and 1,2,3,4-diepoxybutane (Ex. 23-71). Epoxybutene, a monofunctional alkylating agent, is a direct mutagen in *S. typhimurium* strains TA1530, TA1535, and TA100 (Ex. 23-71). It is also a direct-acting mutagen in other bacteria (*Klebsiella pneumoniae* and *Escherichia coli*), and it induces sister chromatid exchanges and chromosomal aberrations in exposed mice (Ex. 17-21).

Diepoxybutane is a bifunctional alkylating agent, and as such it can form cross-links between two strands of DNA. It is mutagenic in bacteria (*K. pneumoniae* and *S. typhimurium*), fungi (yeast and *Neurospora crassa*), and the germ cells of *Drosophila melanogaster*. It also induces DNA damage in cultured hamster cells and in mice, is clastogenic in fungi and cultured rat cells, produces chromosome damage and breakage in *D. melanogaster* germ cells (Ex. 17-21). Diepoxybutane has induced sister chromatid exchanges *in vivo* and *in vitro* assays involving Chinese hamster ovary cells, human lymphocytes and the bone marrow of exposed mice. Chromosomal damage, aberrations, or breakage has been seen from diepoxybutane exposure of human fibroblasts, lymphoblasts, and lymphocytes (Ex. 23-71). Therefore, the evidence indicates that the metabolites of BD are mutagens/clastogens in microbes and animals.

Citti *et al.* demonstrated the formation of an N-7 guanine adduct of epoxybutene after incubation with either deoxyguanosine or DNA (Ex. 23-63). The authors suggested that the formation of these adducts may account for the mutagenic effects of BD and its reactive metabolites (Ex. 17-21).

The findings that BD possesses mutagenic activity in the presence of microsomal enzymes, the fact that probable metabolites are direct-acting mutagens, and other evidence of genotoxicity of BD and its toxic metabolites are consistent with the electrophilic theory of carcinogenesis and support OSHA's conclusions that BD should be regarded as an occupational carcinogen.

E. Conclusions

OSHA's determination that BD is a potential occupational carcinogen was based primarily on the positive findings of chronic inhalation studies in rodents.

BD was carcinogenic to mice of both sexes, producing an unusual neoplasm of the heart. It also produced tumors in a dose-related manner at several other sites including lung, stomach, liver, mammary gland, and the lymphatic system. Rats exposed to BD by inhalation showed dose-related increases in the incidences of common and uncommon tumor types although the rats appeared to be less affected by BD exposure than the mice. The evidence in rodents is supported by epidemiologic findings from styrene-butadiene rubber workers and butadiene monomer production workers. These epidemiologic studies strongly suggest an association between lymphatic, and hematopoietic malignancy and exposure to BD. This evidence is further supported by findings of bone marrow toxicity in animals and the mutagenic activity of BD in bacteria in the presence of an exogenous metabolic system. Suspected metabolites of BD, epoxybutene and 1,2,3,4-diepoxybutane also have been shown to be genotoxic.

Exposure of rodents to BD resulted in ovarian atrophy and uterine involution, testicular atrophy and testicular tumors in mice and an increased incidence of tumors of the reproductive tract in rats suggesting that BD or some of its toxic metabolites may be capable of reaching the germ cells. The results of sperm head morphology and dominant lethality tests in mice are consistent with this conclusion that BD is a reproductive toxin in males and females. Life threatening or rare defects were observed in the fetal offspring of rats exposed to 8,000 ppm of BD during pregnancy and fetal growth retardation and increased incidences of morphologic variations occurred in a dose-related fashion in the offspring of mice exposed at 200-1,000 ppm. These studies are potentially indicative of developmental toxicity.

In summary, findings in humans and experimental animals exposed to BD are indicative of damage to the genetic material (DNA). Evidence from *in vivo* studies in animals or man shows that DNA damage may be manifested as increased incidences of cancer in the adult and mutation in offspring. Other adverse effects from BD exposure, such as acute sensory irritation, hematologic changes, and developmental toxicity are also suggested by the available evidence.

VI. Preliminary Quantitative Risk Assessment

A. Introduction

The United States Supreme Court, in the "benzene" decision, (*Industrial*

Union Department, AFL-CIO v. American Petroleum Institute, 448 U.S. 607 (1980)) has ruled that the OSH Act requires that, prior to the issuance of a new standard, a determination must be made, based on substantial evidence in the record considered as a whole, that there is a significant risk of health impairment at existing permissible exposure limits and that issuance of a new standard will significantly reduce or eliminate that risk. The Court stated that "before he can promulgate any permanent health or safety standard, the Secretary is required to make a threshold finding that a place of employment is unsafe in the sense that significant risks are present and can be eliminated or lessened by a change in practices" (448 U.S. 642). The Court also stated "that the Act does limit the Secretary's power to require the elimination of significant risks" (448 U.S. 644).

The Court in the Cotton Dust case, (*American Textile Manufacturers Institute v. Donovan*, 452 U.S. 490 (1981)), rejected the use of cost-benefit analysis in setting OSHA standards, it reaffirmed its previous position in "benzene" that a risk assessment is not only appropriate, but also required to identify significant health risk to workers and to determine if a proposed standard will achieve a reduction in that risk. Although the Court did not require OSHA to perform a quantitative risk assessment in every case, the Court implied, and OSHA as a matter of policy agrees, that assessments should be put into quantitative terms to the extent possible.

The form a quantitative risk assessment takes depends upon the type of data available and the methodology available for analyzing the data. Data are available for quantifying three types of risk associated with occupational exposure to BD: carcinogenic risk, risk of reduced fertility (i.e. reproductive risk), and risk of developmental effects. For its preliminary assessment of the carcinogenic risk, OSHA has performed a low dose extrapolation using data from two animal inhalation bioassays. For its preliminary assessment of reproductive risk and risk of developmental effects, OSHA has used a safety factor approach with data from studies conducted on rats and mice.

B. Preliminary Assessment of Carcinogenic Risk

1. Choice of Data Base for Quantitative Risk Assessment

The first step in performing a quantitative assessment of carcinogenic risk is to choose a data set or sets which

define the dose-response relationship. Two long-term BD inhalation bioassays have been completed: The NTP mouse bioassay (Ex. 23-1) and the HLE rat bioassay (Ex. 2-31). These studies are described in the discussion of carcinogenic health effects in this preamble. (NTP has very recently completed a second mouse bioassay, but complete data from this study are not yet available.) Despite the shortcomings of each of the bioassays, all five of the BD risk assessments submitted to OSHA used data from one or both of these animal studies to estimate the carcinogenic risk from exposure to BD.

The Office of Toxic Substances, U.S. Environmental Protection Agency (OTS) conducted an assessment of cancer risk to workers exposed to BD during BD monomer production and production of synthetic rubbers, plastics, and resins (Ex.17-5). For its risk assessment, OTS used only the mouse data. The reasons cited for this choice include: (1) the mouse is a more sensitive test species for BD than is the rat; (2) a quality control review had been done for the mouse bioassay at the time OTS wrote its risk assessment whereas none was available for the rat bioassay; (3) there was a greater amount of histopathological data available for the mouse than for the rat; and (4) the test article used by NTP had a much lower dimer concentration than the test article used by HLE.

The Carcinogenicity Assessment Group and the Reproductive Effects Assessment Group in the Office of Health and Environmental Assessment, U.S. Environmental Protection Agency (CAG) conducted an assessment of the mutagenicity and carcinogenicity of BD (Ex. 17-21). In order to quantify the risks associated with BD exposure, CAG used data from both the mouse and the rat bioassays. CAG believed, however, that the rat bioassay had deficiencies which limited its use as the primary data set for animal-to-man extrapolation and thus, used these data only for a sensitivity analysis. The deficiencies in the rat bioassay cited by CAG included the lack of individual rat pathology information available to CAG, the fact that the study had been neither peer-reviewed nor published at the time CAG did its risk assessment, the lack of an independent data quality evaluation for this study, and the uncertainty regarding the number of organ tissues actually examined by the study's pathologists. CAG acknowledged that the mouse study also had deficiencies which stemmed from less than strict adherence to Good Laboratory Practices, but it noted that NTP considered the mouse

bioassay to provide clear evidence of carcinogenicity, the highest classification in NTP's system of categorizing evidence of carcinogenicity. On this basis, CAG chose the mouse bioassay as its primary data source for quantifying risk.

Under contract to OSHA, ICF/Clement (ICF) prepared a document characterizing the risk associated with occupational exposure to BD (Ex. 23-19). Like OTS, ICF used only the mouse data for its quantitative risk assessment. The choice of this data set was based upon ICF's decision to use individual tumor data for some of its analyses; ICF felt that the NTP study provided more detailed and better documented information on the incidence of individual tumors than did the HLE study. In addition, ICF, like CAG, did not believe that the rat bioassay had been adequately validated and cited its uncertainty about the classification of the rat mammary tumors. ICF acknowledged the methodological problems of the NTP bioassay but felt that any bias these problems might introduce to the study's results would be a bias towards underestimation of the true risk associated with BD exposure.

A fourth risk assessment was performed by Environ Corporation for the Chemical Manufacturer's Association (CMA) (Ex. 28-14). Environ estimated risks using both the mouse and the rat data, but felt that estimates of risk based on the rat data would be less uncertain than estimates of risk based on the mouse data. Environ based this judgement on the methodological problems of the NTP mouse bioassay and its belief that the early mortality experienced by the mice and the stress possibly experienced by the mice would contribute to the uncertainty of the estimated risks. Furthermore, Environ believed that the maximum carcinogenic response was reached in the mice at 625 ppm as suggested by the fact that the low and high dose mouse groups had nearly identical numbers of tumor bearing animals. The only flaw in the rat study cited by Environ was that because BD absorption is saturated at 1000 ppm in the rat, Environ believed it was impossible to estimate with accuracy either the internal or effective dose at 8000 ppm in the rat.

The final risk assessment submitted for OSHA's consideration was performed by Dale Hattis and John Wasson at the Center for Technology, Policy, and Industrial Development at the Massachusetts Institute of Technology under a cooperative agreement with the National Institute for Occupational Safety and Health

(NIOSH) (Ex. 29-3). It is a pharmacokinetic/mechanism-based analysis of the carcinogenic risk associated with BD and relies upon both the mouse and the rat data. The Agency is continuing to review this risk assessment, and therefore it is not included in the subsequent risk assessment discussion. The Agency intends to integrate public comments received during and after the hearings, and complete its analysis and conclusion prior to publication of the final standard.

OSHA believes that both the NTP mouse bioassay and the HLE rat bioassay demonstrate the carcinogenicity of BD and that both provide adequate data on which to base a quantitative risk assessment despite their problems. Both of these studies have qualities which make their data suitable for quantifying risk from occupational exposure: Exposure levels were documented; the routes of exposure were the same as is found in most occupational settings (i.e., inhalation); concurrent controls were used; animals were exposed to two different levels of the test substance; and statistically significant excesses of malignant neoplasms were observed in the exposed groups. Like CAG, however, the Agency has decided to base its "best" estimate of risk on the mouse data and to use the rat data to define a range of risks. This decision is based on a number of factors.

First of all, the decision to use the mouse data as the primary data set for quantifying risk is consistent with three of the four risk assessments reviewed by OSHA. Only Environ took a different position. OSHA, however, rejects Environ's argument that the maximum carcinogenic response was reached in the mice at 625 ppm. Environ's argument, based on the observation that all exposed mouse groups had nearly identical numbers of tumor bearing animals, ignores the dose-response relationship seen at almost every site where tumors among exposed mice were significantly elevated over controls.

Another factor which supports use of the mouse data as the primary data set for quantifying risk is that the NTP study has undergone two independent audits. The first audit, conducted by an NTP audit team, originally found discrepancies in the study data of sufficient magnitude to conclude that the data were not appropriate to support firm conclusions about the toxicological potential of BD (Ex. 17-23). Problems included the possible exposure of test animals to chemicals other than BD, the possible mix-up of animals among BD

exposure groups, and the poor quality of animal husbandry practiced in the laboratory by the staff of Battelle Pacific Northwest. Battelle, however, was sufficiently able to resolve discrepancies in the data, (Ex. 17-24), for the NTP audit team to revise its conclusion and consider the bioassay data adequate to assess the carcinogenicity of BD (Ex. 22-3, Attachment 4).

The problems uncovered in this first study audit which would have the greatest impact upon OSHA's assessment of risk are the possible exposure of test animals to chemicals other than BD and the possible mix-up of animals among BD exposure groups. OSHA has evaluated the potential impact of these deviations from Good Laboratory Practices on any estimate of risk the Agency might derive from these data and has concluded that these deviations would not materially affect those estimates of risk. Even if these problems had not been resolved, OSHA believes their effect would be to cause the Agency to underestimate the carcinogenic risk from occupational exposure to BD. For example, if control animals were mixed up in the exposure groups, the effect would be dilution of the tumor incidence of the exposure group, consequently underestimating the risk, as was noted by ICF (Ex. 23-19). On the other hand, if animals from the exposure group were mixed up in the control group, the result would be an elevation of the tumor incidence in the control group. That would decrease the difference in tumor incidence between the exposure and control groups, again resulting in an underestimate of the risk associated with exposures to BD.

The second audit of the NTP bioassay was conducted by CMA (Ex. 17-25). The issues raised in that audit have been answered by NTP (Ex. 22-3) and by OSHA in its Advanced Notice of Proposed Rulemaking (51 FR 35003). While these issues are troublesome, OSHA does not believe they can explain the striking carcinogenic response observed in the mice. This position is supported by the preliminary results from the second NTP mouse bioassay which appear to replicate the results of the first bioassay (Ex. 23-101). OSHA would prefer to base its regulations on data from studies which adhere to Good Laboratory Practices, but OSHA does not believe that the deviations from the study protocol which occurred in the first NTP bioassay invalidate the conclusions of the study. Therefore, OSHA has chosen to rely upon the mouse data for its "best" estimate of risk.

In contrast to the mouse bioassay, criticisms of the rat bioassay put forth by OTS, CAG, and ICF have not been answered to OSHA's satisfaction. In addition, OSHA has several criticisms of its own. For example, OSHA is concerned about the possible lack of comparability among the male rat groups as discussed in the carcinogenic health effects section of this preamble. Another example is that although pathology reports are available for each individual rat used in the study, the site-specific incidence of tumors presented by HLE at the end of Volume I of its report cannot be reconciled with a count from the individual pathology reports. Different tumor counts from the individual pathology reports have produced different estimates of tumor incidences. Environ, for example, reported the incidence of uterine/cervical stromal sarcoma in the female rats as 1 for controls, 5 for the low dose group and 7 for the high dose group. Using the same pathology reports, however, ICF found the incidence of this tumor to be 1 for controls, 4 for the low dose group, and 5 for the high dose group.

As CAG noted, another issue of concern is that it is impossible to determine the exact number of animals examined at each site. For example, Table 31 in the Hazleton report gives 198 as the number of thyroid tissues examined histopathologically for the low dose female group. It is unclear, however, whether at least one slide from each animal in that group was examined at this site or whether two slides were examined for 99 animals in that group and one animal was never examined. This has important implications for quantitative risk assessment.

Another criticism is that although the HLE study has been published, it has not been subjected to a complete pathology peer review. Only the diagnosis concerning thyroid tumors was peer reviewed. The NTP study, on the other hand, has been subjected to such a review. As ICF discussed, it is possible that neoplasia in endocrine organs of the rats may have been over-diagnosed. HLE reported diagnoses in neither control nor high dose group animals of hyperplasia of thyroid follicular cells, adrenal medulla, adrenal cortex, pancreatic islets, and pituitary. Only two diagnoses of thyroid C-cell hyperplasia were reported. This is unusual, for hyperplasia in these organs is a common occurrence in aged rats. An additional issue is that the number of pathologists performing histopathological interpretation of tissues is unclear. Four pathologists are

listed in the report, but the role of each pathologist has never been fully explained. Most carcinogenicity bioassays use only one pathologist to read all slides of a species to assure that there is consistency in the diagnosis of neoplastic and non-neoplastic lesions.

Finally, OSHA believes that the scope and the results of the HLE study audit are limited. Blocks and slides were checked for only ten animals (2%) from the study. In comparison, NTP conducted a 100% slide-block comparison for the high dose and control mice in its study. Furthermore, 74 of the individual animal pathology reports (12%) were not available to the study auditors thus making it difficult to verify that the study's final report was an accurate reflection of the raw data.

Despite these problems, OSHA believes that the HLE rat study demonstrates the carcinogenicity of BD and should not be ignored. These unresolved problems, however, mean that there will be greater uncertainty in risk estimates derived from the rat data than in risk estimates derived from the mouse data. Therefore, like CAG, OSHA will use the rat data to define a range of risks from occupational exposure to BD.

Choosing a data set for quantitative risk assessment entails deciding not only which species is most appropriate but also which sex of a species is most appropriate. OSHA believes that the female mouse and the female rat provide better data on which to base its estimates of risk. Traditionally, both sexes of a species are considered in order to obtain a range of risk estimates. In this case, however, it is not necessary to consider both sexes for this reason because OTS, CAG, ICF, and Environ provide OSHA with that range of risk estimates. Environ posed the question of whether or not it was appropriate to use absorption data from male test animals to estimate absorbed dose in female test animals. OSHA notes that neither CAG nor ICF thought this was inappropriate, and Environ thought it was inappropriate only for the mice and not for the rats.

OSHA believes that there are compelling reasons to choose the females of each species for its quantitative risk assessment. First of all, there is a clearer dose-response relationship among the female mice than among the male mice. This is true not only for total tumor incidence but also for almost every site-specific tumor incidence. OSHA is particularly interested in using the heart hemangiosarcoma incidence data as part of its quantitative risk assessment because heart hemangiosarcomas are so

rare that there can be little doubt their occurrence is associated with anything but exposure to BD. OSHA believes that there may be less uncertainty in risks derived from these incidence data. The data on heart hemangiosarcoma incidence show a clearer dose-response relationship for female mice than for male mice, so OSHA will use the female mice for its quantitative risk assessment.

OSHA prefers the female rat to the male rat because, as discussed previously, there appears to have been some failure in the randomization process for male rats in the HLE study and the low dose rats appear to have been healthier than the control rats. When exposure groups are not comparable across all important factors, it is impossible to reach any sound conclusions about the carcinogenicity of a test substance. OSHA has greater confidence in risk estimates based on the female rat data and thus will use the female rat data to estimate risks.

2. Measure of Dose

Quantitative risk assessments based on animal data are performed under the assumption that animals and humans have equal risks from lifetime exposures to a chemical when exposure is measured in the same unit for both species. Opinions vary, however, on what is the correct measure of exposure. For site-of-contact tumors, a ppm-to-ppm conversion is a generally accepted measure of dose. For systemic tumors, commonly used dose conversions include mg/kg/day, mg/surface area/day, and mg/kg/lifetime. When pharmacokinetic or metabolic data are available, these data should be used to estimate internal dose. By using all available information, the uncertainty associated with estimating risks across species can be reduced.

BD absorption data is available for both B6C3F₁ mice and Sprague-Dawley rats. In 1985 NTP reported results from a BD absorption study using both these species (Ex. 23-7 and Ex. 23-8). Three groups of 30 male rats were exposed to concentrations of ¹⁴C-BD at 70, 950 and 7100 ppm, and three groups of 30 male mice were exposed to concentrations of ¹⁴C-BD at 7, 80 and 1040 ppm. All groups of animals were exposed for six hours except the high dose rat group and the middle dose mouse group which were exposed for only five and one-half hours.

The amount of BD absorbed by each group of rodents was measured as was the volume of air inhaled. These data, along with other data relevant to the calculation of experimental dose, are presented in Table 17.

TABLE 17.—DATA FROM THE NTP STUDY OF 1,3-BUTADIENE ABSORPTION IN SPRAGUE-DAWLEY RATS AND B6C3F¹ MICE.

	Exposure concentrations		Mean weight (kg)	Vol air inhaled (L)	BD inhaled (μg)	BD inhaled (μg/kg)	BD absorbed		Percent
	(ppm)	(μg/L)					μg	μg/kg	
Rats.....	70	125	.404	102.0	12,750.0	31,559.41	881.83	2,182.75	6.9
	950	1,700	.404	99.0	168,300.0	416,584.16	3,500.27	8,664.03	2.1
	7,100	12,800	.368	72.0	921,600.0	2,504,347.83	13,146.30	35,723.64	1.4
Mice.....	7	13	.0269	7.1	92.3	3,431.23	48.69	1,810.04	52.8
	80	145	.0266	12.9	1,870.5	70,319.55	173.12	6,508.27	9.3
	1,040	1,900	.0289	12.4	23,560.0	815,224.91	1,033.31	35,754.67	4.4

The NTP absorption study demonstrated that the rate of BD absorption in rodents is inversely related to exposure concentration. As exposure levels increase, the percent of dose absorbed decreases. It can be shown that the rate of change in BD absorption is very similar for the two rodent species, but the mouse absorbs about three and one-half times the amount a rat absorbs at the same nominal exposure level.

Using the absorption data, calculation of experimental dose is a two step process. First, it is necessary to estimate absorbed dose, and then it is necessary to adjust the absorbed dose to a continuous dose as required by most quantitative risk assessment computer programs. All of the risk assessments submitted to OSHA used the BD absorption data except the OTS risk assessment which assumed 100% absorption and used a ppm-to-ppm conversion.

The other three risk assessments, CAG, ICF and Environ, used the BD absorption data to calculate experimental dose by regressing some measure of absorbed BD on some measure of BD exposure. These risk assessments differed, however, in their choice of measure. For example, ICF measured absorbed dose as a percent of exposed dose whereas CAG measured absorbed dose in μg/kg. When both the dependent and independent variables are transformed using a log transformation, their relationship is remarkably linear regardless of choice of measure.

CAG and Environ used the same model to relate exposed dose to absorbed dose. This model, which we shall call the CAG model, is given by:

$$\text{Log } (\mu\text{g/kg BD absorbed}) = a + \beta \text{ Log (ppm BD exposed)}.$$

This model was fit separately for the mice and the rats, and for both sets of data from the NTP absorption study, there was a good linear fit (for mice, $R^2 = .997$; for rats, $R^2 = .992$). The lines fit to these two sets of data had almost identical slopes (β), but their intercepts (a) were different.

ICF used a different linear model to relate exposed dose to absorbed dose. It chose the model:

$$\text{Log (ppm BD exposed)} = a + \beta \text{ Log (\% BD absorbed)}.$$

Because ICF used only the mouse data for its quantitative risk assessment, this model was fit only to the mouse data. Like the CAG model, this model showed a strong linear relationship between the dependent and independent variables ($R^2 = .937$). Note, however, that ICF's choice of dependent and independent variables are quite different from those used by CAG. While CAG used a linear model to relate absorbed dose measured in μg/kg to exposed dose measured in ppm, ICF used its linear model to relate exposed dose measured in ppm to percent of dose absorbed. Like OTS, ICF measured effective dose in ppm, but unlike OTS, ICF adjusted for absorption. It should be added that ICF never really uses the model it proposes. After fitting the model to the data, it simply states that an absorption rate of 5% will be used for BD exposures of 625 and 1250 ppm because of the uncertainty of the estimate.

OSHA believes that given the information available on BD, estimates of experimental dose should account for differing absorption rates at different exposure levels and across different species. OSHA believes further that a mg/kg/day conversion is more appropriate than a ppm-to-ppm conversion because of the systemic nature of the tumors observed in both animal bioassays. As an alternative to either the CAG or ICF model, OSHA proposes that BD absorption be modeled by:

$$\text{Log } (\mu\text{g/kg BD absorbed}) = a + \beta \text{ Log } (\mu\text{g/kg BD inhaled}).$$

This model differs from the other models in its choice of independent variable. By measuring exposure as μg/kg BD inhaled, we use more of the information available to us, namely weight and inhalation volume, and thus can somewhat reduce the uncertainty associated with our estimate of experimental dose. The measure μg/kg

BD inhaled is available from the NTP absorption study and can be easily estimated using the data available from the mouse and rat bioassays. Like the CAG and ICF models, this model shows a strong linear relationship between the dependent and independent variables for both sets of data (for mice, $R^2 = .980$; for rats, $R^2 = .988$).

Once absorbed dose has been estimated, converting it to a continuous dose is straightforward. For the CAG and OSHA models, the output is absorbed dose per day. Thus, dose needs to be adjusted only by a factor of 5/7 to account for the exposure schedule of five days per week. The experimental doses used by OTS and ICF must also be adjusted also by a factor of 5/7, but in addition, dose must be adjusted by a factor of 6/24 to account for the exposure schedule of 6 hours per day.

Because the NTP mouse bioassay was terminated early, OTS performed yet another adjustment on its estimate of experimental dose to account for this. The adjustment, given as $(L_e/L)^3$ where L_e is length of exposure and L is life expectancy, is justified on the grounds that if exposure had continued, the age-specific cancer rate would have continued to increase as a constant function of the background rate. CAG and ICF also used this adjustment to account for early termination of the study, but an adjustment of $(L/L_e)^3$ was applied to the risks and not to the dose.

OSHA does not believe that this adjustment for early mortality is necessary for estimating risks from the mouse data. The NTP bioassay was terminated early due to high mortality primarily from tumors. If the study had been terminated early for other reasons, then this adjustment would be appropriate, but OSHA does not believe that it is necessary to adjust for tumors which might have occurred had the mice not developed tumors and died.

Table 18 presents the different estimates of the absorbed and continuous doses used in the risk assessments submitted for consideration. Note that CAG and Environ used the same estimates of experimental dose.

TABLE 18.—EXPERIMENTAL DOSES FOR QUANTITATIVE RISK ASSESSMENT^a

	Sex	OTS ^b (ppm)	ICF (ppm)	CAG (Environ) (mg/kg)	OSHA ^c (mg/kg)
Rats:					
1,000 ppm	M	N/A	N/A	10.5 (7.75)	8.06 (5.76)
1,000 ppm	F	N/A	N/A	10.5 (7.75)	8.96 (6.40)
Rats					
8,000 ppm	M	N/A	N/A	37.1 ^d (26.5)	29.78 (21.27)
8,000 ppm	F	N/A	N/A	37.1 ^d (26.5)	33.78 (24.13)
Mice:					
625 ppm	M	625 (21.43)	31.25 (5.6)	25.7 (18.4)	22.01 (15.72)
625 ppm	F	625 (22.52)	31.25 (5.6)	25.7 (18.4)	22.63 (16.16)
Mice					
1,250 ppm	M	1,250 (42.86)	62.50 (11.2)	38.9 (27.8)	31.40 (22.43)
1,250 ppm	F	1,250 (45.04)	6.50 (11.2)	38.9 (27.8)	33.34 (23.81)

^a Dose is daily internal dose. The numbers in parentheses are dose adjusted for continuous exposure.

^b OTS adjusted experimental dose for early termination of the NTP study in addition to converting dose to continuous dose.

^c Weights used are the mean weight for each sex and exposure group as measured at the mid-point of each bioassay.

^d Environ reported an absorbed dose of 38.5 mg/kg for 6 hours exposure.

3. Measure of Carcinogenic Response

In most animal bioassays, exposure to chemical carcinogens is usually associated with elevated tumor incidence at one or two specific sites. BD is unusual in that it is associated with significantly elevated tumor incidence at multiple sites in both mice and rats. There is some debate as to whether tumors at multiple sites should be pooled to estimate overall carcinogenic response or whether only site-specific tumor incidence should be considered. In its Guidelines for Risk Assessment, EPA recommended that tumor sites or types should be pooled to obtain a total estimate of carcinogenic response. Others argue, however, that tumor sites should not be combined because of the differences in metabolic response among organs in the body.

In the past, OSHA has considered both pooled tumor incidence and site-specific tumor incidence as its measure of carcinogenic response. This is the first time, however, that OSHA has proposed regulating a substance associated with tumor induction at so many sites. OTS, CAG, ICF, and Environ all used pooled tumor incidence as their measure of overall carcinogenic response. For each of these risk assessments, incidence in each exposure group was measured as the number of animals bearing one or more tumors at any site where incidence for tumors at that site was significantly or nearly significantly elevated in one exposure

group over incidence in controls divided by the number of animals at risk. In addition, OTS and ICF considered site-specific tumor incidence data to obtain a range of risk estimates. For example, OTS estimated risks using male mouse circulatory hemangiosarcoma incidence data, and ICF estimated risks using data on each tumor type with significantly elevated incidence in male or female mice. Environ considered only pooled tumors, but it considered different combinations of tumors to form the pool. For male mice, Environ considered pooled tumor incidence with and without lymphoma incidence because it considered these tumors to be of questionable relevance to human risk. For male rats, Environ considered pooled tumor incidence with and without Zymbal gland carcinoma incidence because although incidence of this tumor was not significantly elevated, it was nearly significantly elevated in the high dose female rat group. For the female rat, Environ considered pooled tumor incidence with and without mammary fibroadenoma incidence because these tumors are not malignant.

In addition to pooling tumors, all of the risk assessments combined benign and malignant tumors in the lung, liver, and ovary of the mouse and in the pancreas, testes, and thyroid of the rat. Only ICF did not combine papillomas of the forestomach with carcinomas at that

site; the other risk assessments combined these tumors.

OSHA agrees that pooled tumor incidence is an appropriate measure of carcinogenic response and that benign and malignant tumors in the lung, forestomach, liver, and ovary of the mouse and in the pancreas, testes, and thyroid of the rat should be combined. Thus, as its measure of overall carcinogenic response in mice, OSHA will use the number of female mice presenting one or more of the following tumors: Alveolar/bronchiolar adenoma or carcinoma; heart hemangiosarcoma; hepatocellular adenoma or carcinoma; forestomach papilloma or carcinoma; mammary gland acinar cell carcinoma; and ovarian granulosa cell tumor. The site-specific incidence for these tumors are given in Table 1.

For its preliminary risk assessment, OSHA is excluding lymphoma incidence from its measure of overall carcinogenic response. It has been suggested that the extreme lymphoma response observed in the male mice was promoted by an endogenous murine leukemia virus found in the B6C3F₁ mouse but not known to be present in man. By excluding the lymphoma incidence from its preliminary risk assessment, OSHA is neither endorsing this argument nor implying that these tumors are irrelevant in assessing human risk. Indeed, lymphomas are the primary neoplasms observed with increased incidence in the available epidemiological studies.

Furthermore, the Chemical Industry Institute of Technology (CIIT) has reported a 14% incidence of lymphomas in a group of NIH-Swiss mice exposed to 1250 ppm BD for 52 weeks (Ex. 23-59). The NIH-Swiss mice are not known to carry the murine leukemia retrovirus found in the B6C3F₁ mice. Nonetheless, to avoid focusing debate on the role of the murine leukemia retrovirus in lymphoma induction in B6C3F₁ mice, OSHA has excluded these tumors from its analysis and seeks comment on the appropriateness of using lymphoma incidence in its measure of the overall carcinogenic response to BD exposure in B6C3F₁ mice.

As its measure of overall carcinogenic response in rats, OSHA will use the number of female rats presenting one or more of the following tumors: Thyroid follicular adenoma/carcinoma; Zymbal gland carcinoma; and mammary gland fibroadenoma. After reviewing the individual pathology reports for the rats, the Agency does not agree with Environ's finding of a statistically significant increase in the incidence of uterine/cervical stromal sarcoma. Environ found one stromal sarcoma in the control group, five in the low dose group, and seven in the high dose group whereas OSHA's count agrees with ICF's count of one stromal sarcoma in the control group, four in the low dose group, and five in the high dose group. The Agency believes that this difference in estimated incidence of uterine/cervical stromal sarcoma is due to a difference in interpretation of the individual animal pathology reports. Three rats were described as having stromal polyps. Environ must have included these polyps in their count of

stromal sarcomas to have arrived at its incidence estimate. OSHA does not believe there is sufficient information in the individual animal pathology reports to make this determination, and thus did not include the polyps in its estimate of stromal sarcoma incidence.

The Agency agrees with CAG and Environ that Zymbal gland carcinoma incidence should be included in the measure of carcinogenic response in the rat. Although the increase in Zymbal gland carcinoma incidence is not quite statistically significant, these tumors are rare and should therefore be included.

In addition to these measures of overall carcinogenic response, OSHA will consider a second measure of response for each species. For the female mice, OSHA will use the site-specific incidence of heart hemangiosarcomas to estimate risks. The Agency is considering these tumors separately because, as discussed above, they are so rare there can be little doubt that they are associated with anything but exposure to BD. As noted earlier, these tumors have been seen in only one of 2372 untreated male mice and only one of 2443 untreated female mice in two-year studies in the NTP Carcinogenesis Program (Ex. 23-1). For the female rats, OSHA will use pooled tumor incidence excluding mammary fibroadenomas to estimate risks. The Agency is considering this alternative measure of carcinogenic response for the female rats because it is interested in knowing how exclusion of these tumors will affect its estimate of risk.

Although all four risk assessments used the same measure of overall carcinogenic response, the actual numbers used in their low-dose

extrapolations differ considerably. For example, OTS used "life-table" adjusted incidence rates instead of observed rates in its quantitative risk assessment. CAG and ICF used the number of necropsied mice surviving until the first lymphoma death at week 20 as their measure of animals at risk, whereas Environ used the total number of necropsied mice. The reader is referred to each of these risk assessments for the specific rates used.

For its low-dose extrapolation, OSHA will use the observed incidence as its measure of incidence. For its measure of animals at risk, OSHA will use the number of necropsied animals surviving to the week of the first death of an animal with any of the pooled tumors. The first female mouse that died and had at least one of the tumors OSHA is using for its pooled tumor analysis died at week 41 of the NTP study. This mouse presented a heart hemangiosarcoma, so the number of female mice at risk will be the same for the pooled tumor analysis and the heart hemangiosarcoma analysis. The first female rat which died and had at least one of the tumors OSHA is using for its pooled rat tumor analysis died at week 56 of the HLE study. This rat presented a mammary fibroadenoma, so for the pooled rat tumor analysis, the number at risk will be the number of rats surviving to week 56. For the analysis of the rat data excluding the mammary fibroadenomas, the number at risk will be the number of necropsied rats surviving to week 72. The actual numbers to be used for low-dose extrapolation are presented in Table 19.

TABLE 19.—INCIDENCE OF TUMORS IN FEMALE B6C3F₁ MICE AND CD RATS TO BE USED IN QUANTITATIVE RISK ASSESSMENT

	Controls	625 ppm	1,250 ppm
Female Mice:			
Pooled Tumors ^a	3/47 (6.4%)	23/38 (60.5%)	41/45 (91.1%)
Heart Hemangiosarcomas ^b	0/47 (0%)	11/38 (29.9%)	18/45 (40%)
	Controls	1,000 ppm	8,000 ppm
Female Rats:			
Pooled Tumors ^c	40/99 (40.4%)	77/97 (79.4%)	72/96 (75%)
Pooled Tumors excluding Mammary Fibroadenomas ^d	0/90 (0%)	4/85 (4.7%)	15/82 (18.3%)

^a Numerator is number of mice with at least one of the tumors listed in Table 1 except lymphoma; denominator is number of mice surviving to week 41.

^b Numerator is number of mice with heart hemangiosarcomas; denominator is number of animals surviving to week 41.

^c Numerator is number of rats with at least one mammary fibroadenoma, thyroid follicular adenoma/carcinoma, or Zymbal gland carcinoma; denominator is number of animals surviving to week 56.

^d Numerator is number of rats with thyroid follicular adenoma/carcinoma and/or Zymbal gland carcinoma; denominator is number of animals surviving to week 72.

4. Estimation of Occupational Dose

The purpose of low dose extrapolation is to estimate risk of death from cancer at a variety of proposed occupational doses. This requires that the occupational doses be converted into

units comparable to those in which experimental dose is measured.

As discussed earlier, OSHA first converted experimental dose measured in ppm into inhaled dose measured in µg/kg. Then, using the BD absorption

data, OSHA estimated absorbed dose for each inhaled dose. These two steps must again be followed to convert occupational dose measured in ppm into the appropriate units.

A dose of one ppm BD is converted into an equivalent dose measured in mg/m^3 using the equation:

$$1 \text{ ppm BD} = \frac{\text{Molecular Weight BD}}{24.45} = \frac{54.1}{24.45} \text{ mg}/\text{m}^3 \text{ BD}$$

Given a worker weighing 70 kg, breathing 9.6 m^3 of air per eight hour work day, and exposed to dose Y ppm BD, his inhaled dose of BD in mg/kg is given by:

$$Y \text{ mg}/\text{kg BD inhaled} = Y \times \frac{54.1}{24.45} \text{ mg}/\text{m}^3 \times \frac{9.6 \text{ m}^3}{70 \text{ kg}}$$

Once inhaled dose is calculated and converted to $\mu\text{g}/\text{kg}$, absorbed dose is estimated by the model:

$$\text{Log } (\mu\text{g}/\text{kg BD absorbed}) = a + \beta \text{ Log } (\mu\text{g}/\text{kg BD inhaled})$$

proposed above. There are no data available on human absorption of BD. Thus, when risks for occupational doses are estimated from the mouse data, the estimates of a and β in the equation above are those derived from the NTP absorption study's mouse data, and when risks for occupational doses are estimated from the rat data, the estimates of a and β in the equation above are those derived from the NTP absorption study's rat data. In other words, when risks are derived from the mouse data, it is assumed that humans absorb BD at the same rate as do mice, and when risks are derived from the rat data, it is assumed that humans absorb BD at the same rate as do rats.

The model used by OSHA for estimating absorbed dose by inhaled dose is strictly an empirical model. The NTP inhalation study estimated absorbed dose at three inhaled dose levels, and the relationship between the log of absorbed dose and the log of inhaled dose is linear between the lowest and the highest dose used in the study. In the absence of other information, OSHA has extended the observed relationship between absorbed dose and inhaled dose to doses which are lower than those used by NTP in its inhalation study. This observed relationship between absorbed and inhaled dose is such that at some dose greater than zero, 100% absorption is achieved (i.e. the model predicts an absorbed dose equal to the inhaled dose). At doses lower than this, the model predicts absorbed doses greater than inhaled doses. This is because the model is not constrained by biological reality. If the model predicted an

absorbed dose greater than the inhaled dose, OSHA assumed that absorption was 100% and that inhaled dose equaled absorbed dose. For the model derived from the NTP absorption study's mouse data, 100% absorption is reached at just over 2 ppm BD. For the model derived from the rat data, 100% absorption is reached at less than 1 ppm BD.

Once absorbed occupational dose has been estimated, it is necessary to convert the dose into a continuous dose as required by most quantitative risk assessment computer programs. For this final conversion, OSHA assumes that a person works 250 out of 365 days per year, and for 45 out of 74 years of life. The estimates of occupational dose derived by OSHA for use in its quantitative risk assessment are presented in Table 20.

TABLE 20.—ESTIMATES OF OCCUPATIONAL DOSE OF 1,3-BUTADIENE FOR USE IN QUANTITATIVE RISK ASSESSMENT^a

Dose (ppm)	Inhaled dose ^b (mg/kg/8 hrs)	Rats	Mice
		Absorbed dose ^c (mg/kg/8 hrs)	Absorbed dose ^d (mg/kg/8 hrs)
1000	303.45	8.48 (3.53)	18.31 (7.63)
10	3.03	.46 (.19)	1.52 (.63)
5	1.52	.30 (.12)	1.04 (.43)
2	.61	.17 (.07)	.61 (.25)
1	.30	.11 (.04)	.30 (.13)

^a Numbers in parentheses are the continuous doses. Continuous dose assumes exposure for 250/365 days and 45/74 years.

^b Human inhaled dose assumes that a worker weighs 70 kg and inhales $9.6 \text{ m}^3/8$ hour work day.

^c Absorbed dose is estimated from the model log (absorbed dose in $\mu\text{g}/\text{kg}$) = $1.07 + .63 \text{ log (inhaled doses in } \mu\text{g}/\text{kg})$.

^d Absorbed dose is estimated from the model log (absorbed dose in $\mu\text{g}/\text{kg}$) = $2.99 + .54 \text{ log (inhaled doses in } \mu\text{g}/\text{kg})$.

^e 100% absorption is achieved in the mouse at just over 2 ppm.

5. Selection of Model for Low Dose Extrapolation

Several approaches have been used to estimate cancer risk from exposure to toxic agents. A standard approach uses mathematical models to describe the relationship between dose (such as airborne concentration) and response (e.g. cancer). Generally, curves are fit to the data points observed at different exposure levels and these curves are used to predict the risk that would occur at exposure levels which were not observed. The shape of these curves is varied, ranging from linear extrapolations from the observed points through the origin (zero exposure and zero risk) to curves which may deviate far from linearity at the very highest of doses. The use of a particular model or curve can be justified in part by a statistical measure of "fit" to observed data points. That is, there are statistical tests which measure how closely a predicted dose-response curve fits the observed data.

The most commonly used model for low-dose extrapolation is the multistage model of carcinogenesis. This model, from a theory proposed by Armitage and Doll in 1961, is based on the biological assumption that cancer is induced by carcinogens through a series of stages. The multistage model is generally considered to be a conservative model because it is approximately linear at low-doses and because it assumes no threshold for carcinogenesis. "No threshold" means that any exposure to a carcinogen is associated with some amount of risk. "Approximately linear at low-doses" means that one unit of change in dose will result in one unit change in risk at low doses. This usually implies that the fitted curve approaches zero slowly.

The most common approach for using the multistage model is to assume that the dose-response curve is described by a polynomial of $k-1$ degrees, where k is the number of dose groups. The one-hit model is a special case of the multistage model where the value of k is fixed at $k=1$. This model is based on the assumption that there is only one stage in the carcinogenic process. In general, the one-hit model will produce estimates of risk which are larger than those produced by a multistage model of two or more degrees.

All of the risk assessments submitted to OSHA used the multistage model to estimate risks at low doses. Most of the analyses used the traditional $k-1$ stage model with the exception of OTS which used the one-hit model for all its analyses. CAG and ICF used the one-hit model in some of their analyses. CAG used this model for the pooled female rat tumor data, and ICF used this model for the pooled male mouse tumor data and for some of its site-specific analyses. In both the CAG and ICF risk assessments, the one-hit model was used only after the $k-1$ stage model was fit to the data and found to provide an inadequate fit. In each case, the high dose group was dropped from the analysis leaving only one exposure group and the control group. Thus, the one-hit model was the only appropriate model to use.

The risk assessment by Environ was the only risk assessment which considered other models in addition to the multistage model. For its analyses of the mouse data, Environ did not use the multistage model at all. Instead, it used the Hartley-Sielken time-to-tumor model to account for the less than lifetime exposure experienced by the mice in the NTP study. For its analysis of the rat data, Environ used the Mantel-Bryan and Weibull models in addition to the multistage model.

OSHA has consistently evaluated several models when performing quantitative risk assessments based on rodent bioassay results, but the Agency has shown a preference for the multistage model. OSHA has justified this preference on the grounds that the multistage model has the best empirical and theoretical justification for use in making "best estimates" of likely risk at

specific doses. The multistage model is a mechanistic model of the form

$$P(\text{Cancer}) = 1 - \exp(-f(\text{dose})),$$

with $f(\text{dose})$ given by:

$$f(\text{dose}) = a + b_1(\text{dose}) + b_2(\text{dose})^2 + \dots + b_k(\text{dose})^k.$$

The number of stages is specified by k , and the parameters a and b_i are estimated from the observed data. This model approximates the multistage process by the multiplicative linear function $f(\text{dose})$.

The multistage model is preferred not only because it incorporates the multistage theory of Armitage and Doll but also because it may be linear at low doses and assumes no threshold for carcinogenesis (i.e. any exposure is associated with some excess risk). Thus, it is a conservative model and its use is consistent with the position taken by the Office of Science and Technology Policy (OSTP) in its publication *Chemical Carcinogens: A Review of the Science and its Associated Principles* (50 FR 10371; March 14, 1985) that "when data and information are limited, and when much uncertainty exists regarding the mechanisms of carcinogenic action, models or procedures which incorporate low-dose linearity are preferred when compatible with the limited information."

Alternatives to the multistage model are the tolerance distribution models such as the probit model, the logit model, and the Weibull model. The Mantel-Bryan model used by Environ is a modified version of the probit model. These models attempt to describe the distribution of thresholds to carcinogens among individual members of a population. Although these models have been found to adequately model many types of biological dose-response data, as stated by Park and Snee, "it is an overly simplistic expectation to represent the entire carcinogenic process by one tolerance distribution" (Ex. 23-102).

The tolerance distribution models generally predict dose-response relationships which are sigmoid in shape (i.e. S-shaped). Thus, these models will approach zero more rapidly than a linear multistage model. This means that at low doses, these models will predict lower risks than will a linear

multistage model. This is why the multistage model is described as more conservative than the tolerance distribution models.

Because the tolerance distribution models are sigmoid in shape, these models fit data well only when the data is also sigmoid in shape. The multistage model, on the other hand, may be linear at low doses, but can accommodate data which are linear or concave up at moderate doses. (A "concave up" dose-response line is shaped like a hockey stick. The line rises slowly at first but becomes quite steep after the point of inflection.) If the data are concave down, the one-hit model, a special case of the multistage model where the number of stages is one, can accommodate these data. (A "concave down" dose-response line is the mirror image of a "concave up" dose-response line. The line rises rapidly at first but flattens after the point of inflection.) The flexibility of the multistage model means that the model can provide a good fit to many empirical data sets. This flexibility is an additional reason for the Agency to prefer the multistage model for its quantitative risk assessment.

6. OSHA's Estimates of Risk

As described in the previous section, OSHA used the multistage model to estimate the risk of death from cancer due to occupational exposure to BD. Estimates were produced using a version of R.B. Howe and K.S. Crump's Computer Program Global 83 adapted for the microcomputer by M.S. Cohn of the U.S. Consumer Product Safety Commission.

OSHA used the four data sets presented in table 19 for its analyses. A one-hit model and a $k-1$ stage model were fit to each data set (for all four data sets, the model is a $k-1=2$ stage model). The results from OSHA's preliminary quantitative risk assessment are shown in table 21. Both the maximum likelihood estimate (MLE) of risk and the 95% upper confidence limit (UCL) on the MLE are presented. The MLE is a point estimate and represents that value which maximizes the likelihood of the risk. The 95% UCL represents a plausible upper bound below which the true risk is likely to be. Calculations of estimated deaths per 10,000 workers are based on extra risk.

TABLE 21.—ESTIMATES OF CANCER DEATHS PER 10,000 WORKERS EXPOSED TO 1,3-BUTADIENE *

Data	Stages	1 ppm	2 ppm	5 ppm	10 ppm	1000 ppm	X ² _b
Pooled female mouse tumors	k = 1	95 (120)	183 (230)	312 (393)	454 (570)	4301 (5089)	4.02 (1)
	* k = 2	0.6 (80)	2 (153)	7 (263)	15 (383)	1963 (4041)	.54 (1)

TABLE 21.—ESTIMATES OF CANCER DEATHS PER 10,000 WORKERS EXPOSED TO 1,3-BUTADIENE *—Continued

Data	Stages	1 ppm	2 ppm	5 ppm	10 ppm	1000 ppm	X ^{2b}
Female mouse heart tumors.....	k=1.....	28 (37)	53 (71)	91 (122)	134 (179)	1502 (1961)	1.4E-3 (2)
	* k=2.....	27 (37)	51 (71)	88 (122)	128 (179)	1468 (1961)	4.3E-28 (1)
Pooled female rat tumors.....	k=1.....	66 (90)	115 (156)	197 (266)	310 (418)	4431 (5480)	1.5E-26 (—)
	* k=2.....	16 (23)	29 (40)	48 (69)	75 (109)	1312 (1836)	19.29 (1)
Pooled female rat tumors.....	k=1.....	3 (5)	6 (8)	10 (14)	16 (22)	285 (404)	.04 (2)
	* k=2.....	3 (5)	5 (8)	9 (14)	14 (22)	258 (403)	7.9E-30 (1)

* Estimates are derived from the multistage model. Numbers in parentheses are the 95% UCL estimates.

^b Numbers in parentheses are degrees of freedom.

^c For the one-hit model, q(0)=.063, q(1)=.074. For the two-stage model, q(0)=.064, q(1)=0, q(2)=.0038.

^d For the one-hit model, q(0)=0, q(1)=.021. For the two-stage model, q(0)=0, q(1)=.021, q(2)=.0004.

^e For the one-hit model, the high dose group was dropped and q(0)=.518, q(1)=.168. For the two-stage model, q(0)=.709, q(1)=.04, q(2)=0.

^f Mammary fibroadenoma incidence excluded from this analysis. For the one-hit model, q(0)=0, q(1)=.008. For the two-stage model, q(0)=0, q(1)=.007, q(2)=.00005.

The first set of data to be analyzed was the pooled female mouse tumor data set. Both a one-hit and a two-stage model were fit to the data. The two-stage model gave a better fit, but the p-value associated with the goodness-of-fit chi-square from each model was greater than .01, so either model could be said to provide an adequate fit.

The one-hit model is often criticized for being too conservative, and as can be seen in Table 21, the estimates of risk derived from this model for these data are as much as 160 times greater than the estimates of risk derived from the two-stage model. In this case, however, the two-stage model may be criticized for not being sufficiently conservative. When fit to these data, the two-stage model had no linear term, (i.e. q(1)=0), with the result that the model is not linear at low doses. As can be seen, if we let .06 equal one unit of dose and we let .7 equal one unit of risk, then a change in two units of dose between .13 mg/kg BD (1ppm) and .25 mg/kg BD (2 ppm) results in a change in 2 units of risk. Between .25 mg/kg BD (2 ppm) and .43 mg/kg BD (5 ppm), however, a change in 3 units of dose results in a change of 7 units of risk. If the model were linear at these low doses, a change in 3 units of dose should result in a change of 3 units of risk.

The second set of data to be analyzed was the female mouse heart hemangiosarcoma data. The one-hit model provided an excellent fit to these

data. The two-stage model also provided an excellent fit, and the addition of the q(2) term in the model had only a small effect on the MLEs and no effect on the UCLs.

For the pooled female rat tumor data, the two-stage model became a one-hit model (i.e. q(2)=0), and the fit was very poor. This was due to the fact that for this data set, incidence in the low dose group was higher than incidence in the high dose group. OSHA dropped the high dose group and fit a one-hit model to the remaining data.

The final data set to be analyzed was the pooled female rat tumor data excluding the mammary fibroadenomas. Here again, both a one-hit and a two-stage model were fit to the data, and both models provided an excellent fit. As with the female mouse heart hemangiosarcoma data, there was little difference between the MLEs and no difference between the UCLs derived from each model.

At the current OSHA PEL of 1000 ppm, the highest estimate of risk is given by the one-hit model fit to the pooled female rat tumor data including the mammary fibroadenomas as a measure of response and excluding the high dose group to achieve a better model fit. This estimate of 4,431 cancer deaths per 10,000 occupationally exposed workers is very close to the estimate of 4,301 cancer deaths per 10,000 workers given by the one-hit model fit to the pooled female mouse tumor data. The estimates

of risk at 1000 ppm derived from the two-stage model applied to the pooled mouse tumor data, the one-hit model and the two-stage model applied to the female mouse heart hemangiosarcoma data, and the two-stage model applied to the pooled female rat tumor data including mammary fibroadenomas are remarkably consistent. These estimates range from 1300 to 1900 cancer deaths per 10,000 exposed workers. The lowest estimate of risk at the current PEL were given by the models applied to the pooled female rat tumor data excluding the mammary fibroadenomas, 258 to 285 cancer deaths per 10,000 exposed workers.

7. Other Estimates of Risk

In order to judge the reasonableness of OSHA's estimates of risk as compared to those derived in other risk assessments, estimates of cancer deaths per 10,000 workers due to occupational exposure to BD from those risk assessments are presented in Table 22. These numbers were either calculated in the risk assessments or derived from the risk assessments. Risks for exposures of 1, 5, and 10 ppm BD are presented. In reviewing this table, the reader should bear in mind that all of these estimates are based upon different assumptions. These different assumptions are discussed briefly below, but the reader is referred to the individual risk assessments for specific details.

TABLE 22.—ESTIMATES OF CANCER DEATHS PER 10,000 WORKERS EXPOSED TO 1,3-BUTADIENE FROM FOUR DIFFERENT RISK ASSESSMENTS *

Source	Data	Model	1 ppm	5 ppm	10 ppm
OTS ^b	Pooled male mouse tumors.....	One-hit.....	213 (344)	1022 (1585)	1940 (2919)

TABLE 22.—ESTIMATES OF CANCER DEATHS PER 10,000 WORKERS EXPOSED TO 1,3-BUTADIENE FROM FOUR DIFFERENT RISK ASSESSMENTS *—Continued

Source	Data	Model	1 ppm	5 ppm	10 ppm
OTS ^a	Pooled female mouse tumors	One-hit	85 (111)	419 (545)	821 (1060)
OTS ^a	Male mouse hemangiosarcomas	One-hit	40 (57)	198 (281)	392 (554)
CAG ^a	Pooled male and female mouse tumors ^b	Multistage	16 (175)	175 (844)	482 (1619)
CAG ^a	Pooled male rat tumors	Multistage	0 (6)	1 (30)	2 (61)
CAG ^a	Pooled female rat tumors	One-hit	64 (84)	301 (395)	599 (784)
ICF ^a	Pooled Male mouse tumors ^c	One-hit	2613 (3500)	7839 (*)	* (*)
ICF ^a	Pooled female mouse tumors	Multistage	859 (1591)	2576 (4773)	3435 (6344)
Environ	Pooled Male mouse tumors ^d	Hartley-Sielken ^e	47 (55)	N/A	456 (534)
Environ	Pooled male rat tumors ^f	Multistage	1 (7)	N/A	11 (68)
Environ	Pooled male rat tumors ^f	Weibull	0 (6)	N/A	2 (59)
Environ	Pooled male rat tumors ^f	Mantel-Bryan	2 (4)	N/A	48 (88)
Environ	Pooled female rat tumors ^g	Multistage	6 (8)	N/A	58 (79)
Environ	Pooled female rat tumors ^g	Weibull	6 (8)	N/A	57 (79)
Environ	Pooled female rat tumors ^g	Mantel-Bryan	3 (6)	N/A	71 (120)

* = Only UCLs used in quantitative risk assessment. OSHA calculated corresponding MLEs. See text for details.

^a = Estimate of number of deaths per 10,000 exceeds 10,000

N/A = Estimates of risk at 5 ppm not provided

^b Numbers in parentheses are 95% UCL estimates.

^c These numbers have not been adjusted for early termination of the study although CAG did so in its risk assessment.

^d High dose group dropped from the analysis.

^e Incidence of lymphoma excluded from pooled tumor incidence.

^f Model is the Hartley-Sielken time-to-tumor model.

^g Incidence of Zymbal gland carcinoma excluded from pooled tumor incidence.

^h Incidence of mammary fibroadenoma excluded from pooled tumor incidence.

The risk assessment by OTS presented only the 95% UCLs on risk for a variety of doses and occupational scenarios. Estimates were based on the pooled male mouse tumor data, the pooled female mouse tumor data, and the male mouse circulatory hemangiosarcoma data. Risks were derived from "life-table" adjusted incidence rates used with the one-hit model. Doses were based on a ppm-to-ppm conversion, 100% absorption was assumed, and adjustment was made to the experimental doses to account for early termination of the NTP bioassay.

OSHA calculated the MLEs associated with the 95% UCLs estimated by OTS for exposure of 8 hours per day, 240 days per year, for 40 out of 70 years. This exposure scenario was chosen because it is most like the one used by OSHA, thus facilitating comparison of estimated risks. OTS chose the one hit model because it was interested only in estimating the 95% UCLs, and the two-stage model gave negligible estimates of $q^*(2)$ and $q^*(1)$ when fit to the "life-table" adjusted incidence rates.

CAG was interested in estimating the unit risk associated with BD exposure. Estimates of $q^*(1)$ were derived from the

pooled male mouse tumor data, the pooled female mouse tumor data, the pooled male rat tumor data, and the pooled female rat tumor data. Observed tumor incidence rates were used with the multistage model. For the pooled female rat tumor data, the high dose group was dropped, and a one-hit model was fit. Doses were based on a ppm-to-mg/kg/day conversion and varying absorption rates were assumed.

OSHA derived estimates of risk from the CAG risk assessment for different occupational doses using the equality 1 ppm BD = 2.25 mg/m³ and CAG's assumptions that exposure occurs 8 hours per day, 240 days per year, for 45 out of 70 years; that a 35 g mouse breathes .043 m³ of air per day; that a .70 kg rat breathes .354 m³ of air per day; and that absorption at low doses is 54%. Risks were estimated using the computer program GLOBAL 82 by R.B. Howe and K.S. Crump. Following CAG, OSHA calculated the geometric mean of the MLEs derived individually from the male mouse data and the female mouse data. The same was also done for the UCLs. CAG reasoned that because the response was so similar between male and female mice, the geometric mean of

the risks was an appropriate estimate. Although CAG adjusted its estimate of unit risk for early termination of the NTP study in its risk assessment, the numbers presented in Table 22 have not been adjusted.

ICF, like OTS, presented 95% UCLs for a variety of occupational exposure scenarios in its risk assessment. Estimates were based on the pooled male mouse tumor data, pooled female mouse tumor data, male mouse lymphoma data, and female liver tumor data. Only the results of the pooled tumor data are presented here. Estimates are based on observed incidences and are derived from the multistage model for the pooled female mouse tumor data and the one-hit model for pooled male mouse tumor data without the high dose group. Absorption is assumed to vary with dose, doses are based on a ppm-to-ppm conversion, and risks were adjusted for early termination of the NTP study.

OSHA calculated the MLEs associated with the 95% UCLs calculated by ICF for exposure of 8 hours per day, 240 days per year, for 45 out of 70 years estimated by ICF. The risk for exposure at 1 ppm for 45 years

was calculated and adjusted for early termination of the NTP study. That risk was multiplied by 5 and .8 to arrive at an estimate for exposure at 5 ppm where 60% absorption was assumed. The risk at 10 ppm, where 40% absorption was assumed, was calculated by multiplying the risk at 1 ppm by 10 and 4.

Environ presented both MLEs and UCLs in its risk assessment. Risks based on the pooled male mouse tumor data were derived from the Hartley-Sielken time-to-tumor model, and risks based on the pooled male and female rat tumor data were derived from the multistage, Weibull and Mantel-Bryan models. Environ's exposure scenario assumed exposure for 50 weeks per year, for 40 out of 70 years. Experimental dose was based on differing absorption rates for different doses, but a constant 50% absorption was assumed for occupational dose regardless of the nominal occupational dose. Doses were based on a ppm-to-mg/kg/day conversion.

The highest estimates of risk were given by ICF. These estimates are so high because the adjustment used by ICF to account for early termination of the NTP study increases risk estimates by approximately five times. In contrast, the adjustment used by OTS to account for early termination of the NTP study had a much less extreme effect on the estimates of risk. As noted earlier, OSHA does not believe that this adjustment is necessary in this case because the NTP mouse study was terminated early due to the large number of deaths from tumors. The lowest estimates of risk are given by CAC's application of the multistage model to the pooled male rat tumor data and by Environ's application of the Weibull model to the pooled male rat tumor data. These estimates are identical. With the exception of these two lowest estimates, all of the models, including those used by OSHA, predict risks in excess of 1 per 1000 at an occupational exposure of 10 ppm BD. Even at an occupational exposure of 1 ppm, most of the models predict risks greater than 1 per 1000. Models based on the rat data predict lower risks, but these are based either on the male rat data or on the female rat data excluding the mammary fibroadenomas.

8. Discussion

OSHA has chosen to rely upon the NTP mouse data for its "best" estimate of risk because the study has been subjected to two in-depth audits, and preliminary results from a second NTP inhalation bioassay indicate that the original study results can be replicated (Exs. 23-59 and 23-101). The Agency is

reluctant, however, to base its "best" estimate of risk on the pooled tumor incidence among female mice. While the Agency acknowledges that the estimates of risk derived from the one-hit model fit to these data may be conservative, the Agency believes quite strongly that the estimates of risk derived from the two-stage model fit to these data are not sufficiently conservative to protect worker health. The two-stage model fit to the pooled female mouse tumor data is not linear at the doses of interest to the Agency. Rather, the model predicts a dose-response relationship which is concave up.

Low-dose extrapolation models describe dose-response relationships which may take one of three shapes: Concave up, linear, or concave down. A model which is concave up will predict risks at low doses which are smaller than those predicted by a linear model, while a model which is concave down will predict risks at low doses which are larger than those predicted by a linear model. Thus it follows that if a model which is concave up is selected to predict estimates of risk but the true dose-response relationship is linear or concave down, then the risks at low doses will be underestimated. On the other hand, if a model which is concave down is selected to predict estimates of risk but the true dose-response relationship is linear or concave up, then the risks at low doses will be overestimated. If a linear model is selected to predict estimates of risk, however, risks will be underestimated only if the true dose-response relationship is concave down. By choosing a linear model, OSHA selects a model between the two extremes. The Agency believes this preference is prudent public health practice.

At present, OSHA's "best" estimates of risk are those derived from the two-stage model fit to the female mouse heart hemangiosarcoma data. Because of the rarity of these tumors, the Agency is confident that the observed response is a measure of the carcinogenic potency of BD and that the risks derived from the two-stage model are valid estimates of the carcinogenic risk associated with occupational exposure to BD. OSHA prefers the two-stage model to the one-hit model because although the estimates of risk are almost identical, OSHA believes there is greater biological justification for the two-stage model.

The Agency is aware, however, that it may be underestimating the cancer risk from exposure to BD by basing its "best" estimate of risk on the female mouse heart hemangiosarcoma data. At 10 ppm

BD, these data give an estimate of cancer death of 128 per 10,000 exposed. This is lower than almost every estimate of risk at 10 ppm in the risk assessments reviewed by OSHA. Only the estimate derived by CAG from the male rat data and the estimates derived by Environ from the pooled male rat tumor data and the pooled female rat tumor data excluding mammary fibroadenomas are lower at this exposure level. The same is true down to 5 ppm, but below this, CAC's estimate from the pooled male and female mouse tumor data is lower than OSHA's "best" estimate of risk. By relying upon the female mouse heart hemangiosarcoma data for its "best" estimate of risk, OSHA may be underestimating BD's carcinogenic potential.

C. Preliminary Assessment of the Risk of Reproductive Effects and Developmental Effects

Risk assessments employing safety factors have been used for assessing reproductive hazards for regulatory purposes (Exs. 23-72, 23-73); it is a conservative approach that takes into account the inherent limitations of animal studies in their ability to demonstrate adverse effects. Safety factors have the advantage that in the absence of a mechanism-based methodology, they provide a practical means for establishing tolerable exposure levels which are unlikely to be associated with adverse health effects in the human population. Moreover, the use of safety factors is justified because a finding of only resorptions or developmental delays in standard rodent assays does not necessarily ensure that a toxic substance will not cause more severe malformations in animals under other test conditions or in humans exposed in the workplace.

It is necessary to recognize the limitations of this approach. Safety factors rely on only one point of the dose-response curve, the no-observed-effect-level (NOEL). This is, perhaps, the weakest point in the curve, for although no effect is observed, it may be due to study design (e.g. exposure group size) and not the level of exposure. Furthermore, safety factors imply a population threshold which may or may not be plausible. That is, they imply that a level exists below which there is no risk of adverse health outcomes.

For certain outcomes, such as cancer, non-threshold models are usually assumed to apply. As discussed by the Office of Science and Technology Policy (OSTP) in its publication "Chemical Carcinogens: A Review of the Science and its Associated Principles," the

implicit assumption of thresholds in the use of a safety factor approach argues against this approach for cancer risk assessment (Ex. 23-70). OSTP noted that "even if the concept of individual thresholds could be supported, the well recognized genetic variability in the human population would effectively prevent the estimation of a general population threshold value. Moreover, given the high level of background cancer present in the human environment, it seems unlikely that one could rule out the possibility that a new chemical exposure, however limited, might augment an already mechanistic process and thereby produce a collective or additive exposure that exceeds the unknown threshold level" (Ex. 23-70).

This preliminary assessment estimates the human risks of developmental effects and reduced fertility resulting from exposure to BD. The analysis uses a safety factor approach based on rodent studies.

The selection of appropriate safety factors is based on the different doses needed to produce adverse effects in humans and animals. Examination of 7 chemicals causing developmental effects in humans indicated that, when the lowest-observed-effect level (LOEL) is expressed on a weight per unit weight per day basis, the minimally effective doses in humans versus test animals vary by ratios of 1 to 40 (Ex. 23-74). Humans, however, rarely have precisely the same array of developmental defects as animals exposed to the same agent. Thus, even though "equivalent response" is a measurable quantity, projections of human risk from animal data are tempered by the fact that the actual effects in humans may be either more or less severe than those in the animal model.

There are theoretical, as well as empirical, approaches that attempt to explain species differences by examining differences in metabolic and excretion rates. The rate of metabolism of foreign compounds in the body appears to depend on an animal's size. Smaller animals tend to metabolize and excrete toxins more rapidly than larger animals resulting in exposure of the critical organ to a smaller dose of the toxicant. Although there are numerous exceptions, the sensitivity of animals to toxicants varies generally with the 2/3 power of their weight. On this basis, humans would be about ten times more sensitive than most laboratory animals (Ex. 23-75).

Human populations are more variable than inbred laboratory animals. In order to protect the more sensitive individuals, an additional margin of safety of ten is

often employed (Exs. 23-72, 23-75). This factor is arbitrary—it is not presently known how human sensitivity to BD or other developmental toxins varies.

In the absence of definitive data, risk assessments have applied theoretical considerations regarding species-to-species corrections and human variability to use a margin of safety of 100 (Exs. 23-72, 23-75). As a consequence, humans would be expected to be less frequently affected than experimental animals when their exposures are more than 100 times lower than the experimental exposures. Between one-tenth and one-hundredth the experimental exposures, there is a possibility that human risk could be as high as that of the animals tested, and at exposures greater than one-tenth those of the NOEL for animals, humans could even be at greater risk of adverse effects than the experimental animals.

For BD, assessments of the risks of developmental and reproductive toxicity must be based on information from studies conducted using rats and mice. Teratogenic effects were found in rats exposed at 8,000 ppm; the NOEL for rats in two separate experiments was 1,000 ppm. At this level, mice did not demonstrate fetal malformations, but there were skeletal defects and reduced ossification at 1,000 ppm, suggesting that this level for mice is, at best, a no-observed-adverse effect level (NOAEL) for teratogenic effects. Application of a safety factor of 100 to the 1,000 ppm NOAEL indicates that BD exposures below 10 ppm should present little, if any risk of teratogenic effects to the offspring of workers exposed to BD under conditions that would be permitted by the proposed standard.

For BD, the frequency of developmental effects increased with dose. The nature and severity of the effects also changed with dose. In mice, body weight gain of male fetuses was affected at 40 ppm, the lowest dose tested. The body weights of female mice were significantly reduced only when concentrations reached or exceeded 200 ppm; the NOEL was 40 ppm. Since body weight reductions in the male mice were not severe or life-threatening, OSHA accepted 40 ppm as the NOAEL. Use of a safety factor of 100 suggests that there may be some residual risks of developmental toxicity in the offspring of humans exposed to BD at 2 ppm. These effects should be mild and reversible, however, if the results in mice are directly extrapolatable to humans.

There is substantial evidence in mice to suggest that BD poses a hazard to the adult from reduced fertility (See Health Effects section), and consequently,

probably also causes changes in secondary sex characteristics of offspring. These changes in offspring would be predicted from evidence of testicular toxicity. The NOEL for morphologically abnormal sperm heads was 200 ppm; for dominant lethality, the LOEL was 200 ppm (no NOEL found); and for testicular atrophy, the NOEL was 200 ppm 65 weeks into a 2 year study. In female mice, the NOEL for ovarian atrophy was 6.25 ppm with a LOEL of 20 ppm. Ovarian atrophy, if sufficiently extensive, would cause a failure of implantation or early death of the fetus. This effect appears, however, to be a more sensitive indicator of adverse effects than some of the tests of males, such as dominant lethality, with a LOEL of 200 ppm. Use of a safety factor of 100 to project human risk from the animal data suggests that humans may remain at increased risk of reduced fertility from BD exposures that would be permitted by the proposed revision of the PELs.

In summary, OSHA's assessment of the reproductive and developmental risks associated with BD exposure indicates that a TWA concentration limit of 2 ppm will not completely protect against these hazards. It is known from tests conducted on certain other reproductive toxins that short-term high dose exposures may pose special dangers not otherwise indicated. However, there is no information on BD regarding dose-rate and reproductive or developmental toxicity and this possibility was not considered in proposing a STEL for BD.

For BD's reproductive and developmental effects, the mouse appears to be more sensitive than the rat to concentrations of BD in the air. If humans are more like the rat than the mouse, perhaps a lower margin of safety could be applied to predict human risk. In contrast, however, evidence of developmental effects and reduced fertility are present at the lowest dose studied in some BD experiments, so that a LOEL, and not a NOEL, must be employed in parts of the analysis of risk. In such circumstances, there would always be concern that the use of safety factors could underpredict the risk to humans.

Other uncertainties are imposed because of limitations inherent in the BD test data. Some studies showing effects that would influence fertility were designed for other purposes (e.g. carcinogenicity); others were limited in their ability to detect adverse changes because of limitations of protocol. In some cases, a NOEL was not found, and OSHA had to rely on information from

the lowest dose tested. Presently, evidence of reproductive and developmental toxicity is limited to tests conducted on mice and rats; no other mammalian species has been tested, and there is no evidence in humans. In addition, tests of BD's developmental effects have focused on death of the developing organism, structural abnormalities, and in utero growth retardation; functional deficiencies in postnatal capability, (e.g. in the central nervous system or lung), have not been sought. (See Exs. 23-73, 23-76 for a description of postnatal effects and reproductive risks.)

In this risk assessment for BD, OSHA has relied primarily on a method employing a margin of safety approach to estimate the risks of reproductive hazards. Although the use of margins of safety is a generally accepted methodology (Exs. 23-72, 23-74, 23-75), OSHA has often relied on a more quantitative approach to risk assessment in order to establish significant risks. To date, only a few attempts have been made to develop methodology to quantitatively assess the risks associated with reproductive and developmental hazards. Therefore, OSHA is currently searching for methods to better quantify these risks and the Agency welcomes any information with respect to this issue.

VII. Significance of Risk

OSHA's overall analytic approach for setting worker health standards is a four-step process consistent with recent court interpretations of the OSH Act and a rational objective policy formulation. In the first step, quantitative risk assessments are performed where possible and considered with other relevant factors to determine whether the substance to be regulated poses a significant risk to workers. In the second step, OSHA considers which, if any, of the proposed standards being considered for the substance will substantially reduce the risk. In the third step, OSHA looks at the best available data to set the most protective exposure limit that is both technologically and economically feasible. In the fourth and final step, OSHA considers the most cost-effective way to achieve the objective.

In the Benzene decision, the Supreme Court indicated when a reasonable person might well consider the risk significant and take steps to decrease it. The Court stated:

It is the Agency's responsibility to determine in the first instance what it considers to be a "significant" risk. Some risks are plainly acceptable and others are plainly unacceptable. If for example, the odds

are one in a billion that a person will die from cancer by taking a drink of chlorinated water, the risk clearly could not be considered significant. On the other hand, if the odds are one in a thousand that regular inhalation of gasoline vapors that are 2% benzene will be fatal, a reasonable person might well consider the risk significant and take the appropriate steps to decrease or eliminate it. (*I.V.D. v. A.P.I.*, 448 U.S. at 655).

The Supreme Court's language indicates that the examples given were of excess risk over a lifetime. It speaks of "regular inhalation" which implies that it takes place over a substantial period of time and refers to the "odds * * * that a person will die," obviously a once in a lifetime occurrence.

The Court indicated, however, that the significant risk determination required by the OSH Act is "not a mathematical straitjacket" and that "OSHA is not required to support its findings with anything approaching scientific certainty." The Court ruled that "a reviewing court (is) to give OSHA some leeway where its findings must be made on the frontiers of scientific knowledge (and that) * * * the Agency is free to use conservative assumptions in interpreting the data with respect to carcinogens, risking error on the side of overprotection rather than underprotection" (448 U.S. at 655, 656).

As part of the overall significant risk determination, OSHA considers a number of factors. These include the type of risk presented, the quality of the underlying data, the reasonableness of the risk assessments, the statistical significance of the findings and the significance of risk (Arsenic, 48 FR 1864, January 14, 1983).

Exposure to BD can cause a number of serious health effects. As discussed above, BD exposure caused a variety of cancers in experimental animals, including hemangiosarcomas of the heart, malignant lymphomas and alveolar/bronchiolar adenomas and carcinomas. BD exposure also poses potentially adverse reproductive and developmental risks as well as the risk of anemia.

In this preamble OSHA has presented data demonstrating a dose response relationship between BD exposure and cancer in experimental animals, epidemiological evidence of increased mortality from cancers of the lymphopoietic system in humans and evidence of reproductive and developmental toxicity in animals. Unlike the data on carcinogenic and reproductive and developmental effects in experimental animals which are quantifiable, the human data and the mutagenic data are insufficient to

enable OSHA to incorporate them into a quantitative risk assessment. Nevertheless, these data provide further qualitative evidence of serious adverse health effects.

Mutagenic effects have been identified in both *in vitro* and *in vivo* test systems. Evidence that BD or its metabolite possesses mutagenic activity is consistent with evidence that BD is a carcinogen. Other possible adverse effects caused by BD's ability to alter somatic and germ cells are presently unknown, and it is not possible to quantify the genetic risks attributable to BD's mutagenic activity at this time.

Clearly, the cancers associated with BD are risks of the most serious and often fatal kind. The other diseases, primarily reproductive and developmental effects, are serious and potentially fatal. Although OSHA's preliminary finding of significant risk is based on the cancer risk which the agency believes is, by itself, sufficient to show significant risk, the other risks, which cannot be quantified completely, support the finding.

As discussed above, OSHA has performed a quantitative risk assessment based on the NTP inhalation study of mice. Statistically significant elevated tumor incidence was observed in the mice at multiple sites. Overall tumor incidence exceeded 80% in all exposure groups, despite early termination of the study.

OSHA's "best" estimate of risk was derived from the female mouse heart hemangiosarcoma data using the multistage model. At the current PEL of 1,000 ppm BD, this model predicted 147 excess cancer deaths per 1,000 employees assuming such employees have regular exposure to BD for the period of a working lifetime (45 years).

This estimate of risk for BD is well in excess of the one death per thousand employees suggested by the Supreme Court in the Benzene decision as representing a "significant risk." Moreover, risk for BD at the current PEL exceeded the risk for other hazardous substances which OSHA has found to be significant in previous rulemakings. Estimates per 1,000 employees for a working lifetime exposure were 148-425 lung cancer deaths from inorganic arsenic (48 FR 1864, 1896, January 14, 1983); 63-109 cancer deaths from ethylene oxide (49 FR 25763, June 22, 1984); 70-110 angiosarcoma cancer deaths from ethylene dibromide (48 FR 45975, October 7, 1983) and 95 leukemia deaths from exposure to benzene (52 FR 34505, September 11, 1987) based on the PELs prior to the completion of new lower standards.

While OSHA has relied on the multistage model to determine risk from exposure to BD at the current and proposed permissible exposure limits, the Agency did review the risk assessments based on other data and employing other mathematical models. Since other models calculated the risk only at 10 ppm, for the purpose of comparison, OSHA conducted another risk assessment at this 10 ppm, in addition to its best estimate of risk at 1,000 ppm. OSHA risk estimates at 10 ppm were very consistent and compatible with those estimated by other models. OSHA's best estimate of risk at 10 ppm based on the female mouse heart hemangiosarcoma data is 13 cancer deaths per 1,000 employees. In estimating risks from the pooled male mouse tumors data, Environ estimated 47 deaths per 1,000 employees at 10 ppm using a time-to-tumor model (Ex. 28-14). CAG estimated 60 deaths per 1,000 employees at 10 ppm using the pooled female rat tumor data and the one hit model (Ex. 17-21). Also at exposures of 10 ppm, OTS estimated 39 deaths per 1,000 employees using the male mouse hemangiosarcoma data and the one-hit model (Ex. 17-5).

Estimates would, of course, be much higher for exposure at the current PEL of 1,000 ppm. These risk estimates support OSHA's preliminary determination that significant risks exist from exposure to BD at the current PEL.

Public response to the ANPR indicates agreement that the current permissible exposure limit is too high. What remains at issue is how low the PEL should be, with industry sources favoring 10 ppm, and employees and their representatives favoring 1 ppm. Many industries have already voluntarily established limits well below 1,000 ppm, and some industries are below the 10 ppm recommended by ACGIH in 1983. OSHA believes that these voluntary reductions may, in part, reflect concern of management that workers exposed to BD at the current PEL are at risk of adverse health effects.

In short, OSHA's preliminary risk estimates from BD are similar to other risks which OSHA has concluded are significant and are substantially higher than the example presented by the Supreme Court. Moreover, the risk estimates are well supported by quantitative and qualitative data. Consequently, OSHA concludes that the risk estimate of 147 deaths per 1,000 employees is clearly significant and preliminarily concludes that BD presents a significant risk at 1,000 ppm.

OSHA's best estimate of cancer risk at the proposed PEL of 2 ppm is 5 per 1,000 employees for 45 years of

exposure. The Agency's own analyses, however, have produced estimates of risk which range from .2 per 1,000 to 18 per 1,000 at this exposure level. Any of these estimates is statistically plausible, but as discussed in the Preliminary Quantitative Risk Assessment section of this preamble, the uncertainty associated with any of these estimates is greater than the uncertainty associated with the estimate derived from the female mouse heart hemangiosarcoma data. The estimate of risk at 2 ppm derived from the two-stage model fit to the pooled female rat tumor data is 3 per 1,000, but the two-stage model gives a very poor fit to these data. When the high dose group is dropped and a one-hit model fit to the data, the estimate of risk at 2 ppm increases to 12 per 1,000 but this estimate does not rely on all the available data. When the mammary fibroadenoma incidence rates are excluded from the pooled female rat tumor data, the multistage model gives an estimate of risk of 1 per 1,000 at 2 ppm, but here again, important information is excluded. As discussed in the carcinogenic health effects section of this preamble, many experts believe that mammary fibroadenomas represent a carcinogenic response, and the observation of an increase in the number of tumors per tumor bearing rat provides additional evidence of the carcinogenic potency of BD. The pooled female mouse tumor data give the lowest estimate of risk at 2 ppm when fit to a two-stage model, .2 per 1,000, but until the relevance of lymphomas in the mouse is determined, the meaning of this risk estimate is unclear. OSHA's best estimate of cancer risk is based on the female mouse heart hemangiosarcoma data because these tumors are so rare there can be little doubt that they are due to anything but BD exposure. Yet, in basing its best estimate on these data the Agency is excluding other tumor incidence data, and this contributes to the uncertainty of OSHA's estimate.

OSHA believes that the cancer risk of exposures at the proposed exposure limit of 2 ppm will be significant. In addition, estimates of risk of reproductive and developmental toxicity indicate that there may still be significant risks of these adverse effects at the proposed 2 ppm limit.

Guidance for the Agency in evaluating significant risk is provided by an examination of occupational risk rates and legislative intent. For example, in the high risk occupations of fire fighting, and mining and quarrying, the average risk of death from occupational injury or an acute occupationally related illness from a lifetime of employment (45 years)

is 27.45 and 20.16 per 1,000 employees, respectively. Typical risks in occupations of average risk are 2.7 per 1,000 for all manufacturing and 1.62 per 1,000 for all service employment. Typical risks in occupations of relatively low risk are 0.48 per 1,000 in electric equipment and 0.07 per 1,000 in retail clothing. These rates are derived from 1979 and 1980 Bureau of Labor Statistics (BLS) data from employers with 11 or more employees adjusted for 45 years of employment for 48 weeks per year. These rates include only fatalities from cases reportable to BLS and generally exclude deaths from chronic exposure to chemicals.

There are relatively few data on risk rates for occupational cancer as distinguished from occupational injury and acute illness. The estimated cancer fatality rate from the maximum permissible occupational exposure to ionizing radiation is 17 to 29 per 1,000 (47 years at 5 rem; Committee on the Biological Effects of Ionizing Radiation (BEIR) III predictions.) However, most radiation standards require that exposure limits be reduced to the lowest level reasonably achievable below the exposure (the ALARA principle). Approximately 95% of radiation workers have exposures less than one-tenth the maximum permitted level. The risk at one-tenth the permitted level is 1.7 to 2.9 per 1,000 exposed employees * * * (BEIR I estimates are 30 to 60 per 1,000 at 5 rem per year and 3 to 6 per 1,000 at one-tenth that level.)

Congress passed the Occupational Safety and Health Act of 1970 because of a determination that occupational safety and health risks were too high. Based on this, it is clear that Congress gave OSHA authority to reduce risks of average or above average magnitude when feasible. OSHA believes that the proposed standard for BD will reduce risk from OSHA's best estimate of 147 per thousand at the current PEL to below OSHA's best estimate of 5 per thousand, and, therefore, the Agency is carrying out the Congressional intent within the limits of feasibility and is not attempting to reduce insignificant risks.

OSHA has determined that the existing standard for BD poses significant risk of cancer to employees. Even under current exposure conditions which the Agency estimates are well below the current PEL, OSHA's best estimate of cancer deaths due to occupational exposure to BD is in excess of 25 among the 5700 workers in the crude, monomer, and polymer production sectors of the industry (see the Summary of Preliminary Regulatory Impact and Regulatory Flexibility

Analysis section of this preamble for details). For BD, the proposed TWA concentration limit would be set at the lowest feasible limit because there is still a residual risk of developing cancer from exposure to BD despite a 500-fold reduction in permissible exposure. After implementing controls to comply with the 2 ppm proposed PEL, OSHA's best estimate of cancer deaths due to occupational BD exposure is in excess of 3 among the 5700 affected workers. Because of the feasibility limitations, OSHA integrated other protective provisions into the proposed standard to further reduce the risk of developing cancer among employees exposed to BD. Employees exposed to BD at the proposed TWA concentration limit without the supplementary provisions would remain at risk of developing adverse health effects, so that inclusion of other protective provisions, such as medical surveillance and employee training, is both necessary and appropriate. The inclusion of these supplementary provisions would reduce the residual risks for workers. Although the additional reduction in risk is not quantifiable, OSHA believes it is reasonable to assume that the revised TWA exposure limit coupled with the STEL and associated ancillary provisions, substantially reduces residual significant risk.

Under both the Congressional intent and the Supreme Court rationale, OSHA must, if feasible, seek to reduce risks below those estimated by the risk assessments to persist at a PEL of 2 ppm. However, OSHA expects that the proposed rule as drafted will reduce the risks of BD below those estimated using the mathematical model. The estimates of risk consider only exposures at the PEL, and do not fully take into account the other protective provisions of the proposed standard such as medical surveillance. The decrease in risk to be achieved by additional provisions cannot be adequately quantified beyond a determination that they will add to the protection provided by the lower PEL alone. OSHA has determined that employers who fulfill the provisions of the standard as proposed will provide protection for their employees from the hazards presented by occupational exposure to BD well beyond those which would be indicated solely by reduction of the PEL.

In determining the level to which the permissible exposure limit should be lowered, several alternative 8-hour limits and excursion limits were considered. Specifically, OSHA considered 8-hour TWAs of 10 ppm, 5 ppm, 2 ppm, and 1 ppm, with

corresponding STELs of 50 ppm, 25 ppm, 10 ppm, and 5 ppm. OSHA believes that compliance with an 8-hour TWA of 2 ppm coupled with a STEL of 10 ppm is technologically and economically feasible at this time based on data indicating that several industries or industry segments are presently controlling exposures to or very near this level. Regarding the feasibility of compliance with a PEL of 1 ppm, however, OSHA's current data indicate such compliance is infeasible since available technology that is already in place could not achieve the PEL of 1 ppm. In those operations employing modern and available technology 1 ppm could not be achieved due to intermittent releases and not continuous sources. The current technology employs closed systems. OSHA's preliminary analysis of technological and economic feasibility of the proposal is discussed in the following section of the preamble.

VIII. Engineering Controls To Reduce Worker Exposures

Since the feasibility of engineering controls depends heavily on the chemical and physical characteristics of the substance, as well as production or process technologies, the following information has been used by OSHA for its feasibility assessment.

BD is a flammable gas at atmospheric pressure and temperature, therefore it is always handled in closed systems with precautions taken to minimize leaks. At 25 °C it can be liquefied at a pressure of 25 psig. It is produced and consumed under pressure, stored and transported as a liquid. Process equipment is opened only for maintenance and product sampling. Because equipment for monomer production, storage tanks, loading and unloading equipment, some polymerization reactors, and monomer recovery equipment are located outdoors, leaks and other emissions are diluted and dispersed in the atmosphere and thus the exposure of workers to BD are minimized or avoided (Ex. 3-21). For example, in the case of monomer production, the processes are highly automated using the enclosed system, and operators monitor them from control rooms, spending little time in the actual process areas.

Workers are exposed to BD when loading and unloading monomer; taking samples and handling samples in laboratories; exposing leaks from processing equipment piping, and pumps; opening up equipment and lines for maintenance work; and venting waste and noncondensable gases from processes. The use of engineering controls to minimize these leaks are discussed below.

Most crude BD and monomer is transported by pipeline, but plants remote from the petrochemical producers receive BD by barges, rail tank cars or tank trucks (Ex. 3-21). In pipeline transfer, the BD is totally enclosed, eliminating loading/unloading exposure problems. But with other methods of transport (e.g. tank cars), operators are potentially exposed while coupling and uncoupling hoses and gauging tank levels. Exposures during connecting and disconnecting transfer lines can be minimized by purging them with nitrogen and venting to a flare. Frequently slip-tube gauges are used to monitor tank levels. A slip-tube gauge releases a plume of BD to the air when the level reaches a predetermined point, thus sending a signal to the operator and eliminating the need to stand close to the tank as it empties. Magnetic gauges, operating without release of vapor to the air, are an improvement over slip-tube gauges (Ex. 16-29).

Sampling for quality control is another source of exposure to BD workers. Quality control samples are sometimes manually taken in cylindrical containers called bombs. The bomb is connected by tubing to a sample port, BD is allowed to flow through it and displace (purge) the air or inert gas within it, then valves at both ends of the bomb are closed, and the bomb is disconnected from the sampling line and sent to the quality control laboratory. Manual sampling using bombs subjects technicians to excessive BD exposure, especially during the purging process, where the process fluid is allowed to escape through the bomb to the other end through to atmosphere. Various methods for reducing or eliminating this exposure have been devised. In some instances it has been proven to be feasible to use on-line gas chromatographs to replace manual sampling operations. In closed-loop sampling, the outlet end of the bomb is connected to a production/process line at lower pressure than the sample port. When the valves are opened, process fluid flows through the bomb into the low pressure line. The only vapors escaping are those in the cavity of open ends of the lines when the bomb is disconnected. This hookup can be refined further by piping inert gas into the sampling circuit in a fashion to permit purging BD from the line cavities after the valves to the sample bomb have been closed (Ex. 16-29). Placing the sampling port in an enclosure or fuming exhausted cupboard to a venting or flare system is another measure that can be taken (Ex. 16-29). Closed-loop sampling requires a downstream line, not always available, at lower pressure than the

upstream sampling line, into which the purge line can be run. Such a lower pressure line can be provided by running a collection line to a flare or vent line. Pumps mounted downstream from the sampling bomb is another method for purging. Handling of samples in the laboratory may expose laboratory personnel to BD. Gas released from the bombs for passage through analytical equipment should be exhausted within hoods. Purging of the bombs, if done in the laboratory, should be conducted in hoods.

Various types of equipment releases BD into the working environment. Examples are leaks from flanges on towers, piping, reactors, and heat exchangers, from seals on pump, compressor and agitator shafts, through imperfectly seated relief valves, from drain valves and then associated end caps, and from valve stems. A number of methods for minimizing some types of leaks, or their effects, can be adopted. One control practice is to regularly inspect equipment and lines where leaks may occur and have the necessary maintenance work performed promptly. Restricting access to areas where leaks are likely is a complementary practice. Continuous monitoring with an alarm system to alert workers of leak occurrence would definitely lessen the extent and the magnitude of workers' exposure, if maintenance or repair work is performed promptly.

The problem of leaks due to the imperfect sealing of relief valves is sometimes resolved by installing rupture disks upstream from the valves. Occasionally it is practical to stop leaks through valves on lines opening into the work area by capping the open ends of the lines.

Many process vessels and storage tanks and the final stages of recovery or stripping processes have to be vented periodically or continuously to remove non-condensable gases. Sometimes vent streams are passed through solvent recovery operations to recover BD but other times they are vented directly to the atmosphere or flared.

Leaks from pumps, compressors and polymerizer agitators are common sources of employees' exposure. BD

escapes around the rotating drive shaft. The simplest type of seal involves compressing packing in a stuffing box around the shaft in the opening to the pump or vessel. When the pumped fluid is free of particulates, as is the case for BD, mechanical seals can be used; the seal consists of two precisely finished annular metal faces pressing against each other, the faces perpendicular to the shaft. One face rotates with the shaft; the other is fixed. Pressure from the fluid in the pump plus spring pressure press them together. Better seals may be obtained with the mechanical seals than with packing. Double or tandem seals consists of two mechanical seals mounted close together on the shaft and contained in an enclosing structure which may be part of the pump casing. A seal liquid, usually oil, is circulated through the cavity between the seals. If the seal liquid is maintained at a higher pressure than the product stream, possible seal failure can be detected by a drop in the pressure of the seal liquid system. In an alternative scheme the seal liquid is run at lower pressure than the fluid being pumped, escaping fluid from the pump mixes or dissolves in the seal liquid and is vented under control from the seal liquid circulating system (Ex. 17-18). Mechanical seals are generally used on both pumps and agitators. More complex seals may be required for compressors.

In some instances, inside buildings for example, local exhaust ventilation may be used to capture the escaped vapors from pump and agitator shafts into the work area. Equipment which must be opened frequently for maintenance may be purged with inert gas, steam or water to flush out BD before it is opened.

IX. Summary of Preliminary Regulatory Impact and Regulatory Flexibility Analysis

A. Introduction

BD is a high-volume chemical used primarily in the manufacture of synthetic rubbers via polymerization. Although there are three commercial processes available to produce BD, today virtually all BD is produced by the

ethylene co-product method. In the ethylene co-product method, BD monomer is produced by a two-stage process: (1) Production of the C₄ co-product during the manufacture of ethylene; and, (2) the recovery of BD from the C₄ co-product. Since virtually all domestically produced BD is manufactured by the ethylene co-product method, these two stages were used to classify the operations in the industry. Activities that solely produce the C₄ co-product were classified as Crude BD operations. Activities that recover BD from the C₄ co-product were classified as BD Monomer operations. Finally, activities that use BD to produce synthetic rubber via polymerization were classified as BD Polymer operations.

B. Industry and Exposure Profile

The rising price of natural gas during the 1970s caused ethylene producers to switch to the use of heavier, less expensive feedstocks. The use of these heavier feedstocks, which require greater severity in the cracking process, increased the BD concentration in the co-product streams. Today typical C₄ co-product streams of ethylene product are composed of about 40 percent BD (Ex. 30).

According to CMA, there are 30 facilities, operated by 20 firms, that produce crude BD (Ex. 28-14). JACA reports that one of these facilities, is no longer in operation (Ex. 30). Of the 29 facilities in operation, 19 are classified as crude BD producers. The remaining 10 facilities also recover BD and are also classified as BD monomer producers.

The crude producers employ approximately 580 workers with potential BD exposures and have an estimated annual capacity of crude BD (i.e., contained in the C₄ co-product stream) of 847 million pounds (Ex. 30). Table 23 provides a snapshot estimate of the number of workers exposed in each job category over various ranges of exposure within the crude BD industry. For example, in the case of tank farm technicians, on an average day an estimated 25 of 29 workers are exposed to less than 2 ppm.

TABLE 23.—CURRENT EXPOSURE PROFILE—CRUDE BD PRODUCTION¹

Occupational group	Numerical and percentage distribution of workers by concentration range (ppm)							Total
	<2 ^a	<1	1-<2	2-2	2.5-2.5	5-<10	>10	
Process technician:								
Tank farm	25	23	2	1	1	0	2	29
	86%	78%	8%	3%	3%	0%	8%	100%
Pump alley	176	139	37	9	23	12	12	232
	76%	60%	16%	4%	10%	5%	5%	100%
Control room	80	76	4	1	3	2	1	87
	80	76	4	1	3	2	1	

TABLE 23.—CURRENT EXPOSURE PROFILE—CRUDE BD PRODUCTION ¹—Continued

Occupational group	Numerical and percentage distribution of workers by concentration range (ppm)							Total
	<2 ²	<1	1-2	2-2	2.5-2.5	5-10	>10	
Lab technician:	93%	88%	5%	1%	3%	2%	1%	100%
Analysis.....	49	42	7	2	4	2	1	58
Cylinder voiding.....	84%	72%	12%	4%	7%	4%	1%	100%
Other:	17	13	4	1	5	5	30	58
Maintenance.....	30%	23%	7%	2%	8%	8%	52%	99%
Total.....	106	99	7	2	4	2	2	116
	91%	85%	6%	2%	3%	2%	2%	100%
	453	392	61	16	40	23	48	580
	79%	68%	11%	2%	7%	4%	8%	100%

Source: JACA Corporation (Ex. 30).

¹ This is the estimated number of workers in each exposure grouping during any one day. Because of the variation of exposures, individual employees may fall in different exposure groupings on different days.² This column is the extent of workers' exposure below OSHA proposed PEL of 2 ppm.

According to CMA there are 12 facilities, operated by 10 companies, that produce refined (99% pure) BD. These facilities have a combined annual capacity of 3,585 million pounds of refined BD. Ten of these facilities are also capable of producing crude BD and have a combined annual capacity of

1,720 million pounds of crude BD (Ex. 28-14), of the BD monomer capacity, i.e., 3,065 million pounds, recover the BD from the C₄ co-product stream either through extractive distillation or through solvent extraction. The remaining one facility, with an annual capacity of 520 million pounds, produces BD from the

dehydrogenation process. The BD monomer producers employ approximately 550 workers with potential BD exposures (Ex. 30). An estimate of the number of workers exposed on a given day over various ranges in the monomer sector is presented by job category in Table 24.

TABLE 24.—CURRENT EXPOSURE PROFILE—BD MONOMER PRODUCTION ¹

Occupational group	Numerical and percentage distribution of workers by concentration range (ppm)							Total
	<2 ²	<1	1-2	2-2.5	2.5-5	5-10	>10	
Process technician:								
Railcar.....	33	26	7	2	5	5	7	52
	63%	50%	13%	4%	10%	9%	14%	100%
Tank truck.....	5	4	1	0	1	1	1	8
	63%	50%	13%	4%	10%	9%	14%	100%
Tank farm.....	31	28	3	1	1	0	3	36
	86%	78%	6%	2%	3%	1%	8%	100%
Pump alley.....	126	99	27	7	17	8	8	166
	76%	60%	16%	4%	10%	5%	5%	100%
Control room.....	43	41	2	1	1	1	1	47
	92%	88%	4%	2%	2%	2%	2%	100%
Lab. technician:								
Analysis.....	31	26	5	1	3	1	0	36
	86%	73%	13%	3%	7%	3%	1%	100%
Cylinder voiding.....	10	8	2	1	3	3	19	36
	28%	22%	6%	3%	8%	8%	53%	100%
Other:								
Maintenance.....	153	148	11	3	6	3	3	174
	91%	85%	6%	2%	3%	2%	2%	100%
Total.....	438	380	58	16	37	22	42	555
	80%	69%	10%	3%	7%	4%	7%	100%

Source: JACA Corporation (Ex. 30).

¹ This is the estimated number of workers in each exposure grouping during any one day. Because of the variation of exposures, individual employees may fall in different exposure groupings on different days.² This column is the extent of workers' exposure below OSHA proposed PEL of 2 ppm.

The chief use of BD monomer is in the production of polymers. More than half of the BD produced is used in the manufacture of styrene-BD rubber and poly-BD rubber. (See JACA for a detailed breakdown of 1986 BD consumption.) The BD-based polymers are used in-turn to produce a broad range of end products, of which tire and

rubber products represent the largest fraction (Ex. 30).

There are several processes for producing BD-based polymers, but they are all similar in terms of the basic steps in which BD is received, processed and recovered. Although Multinational Business Services in its report to OSHA (Ex. 29-6) stressed the diversity of individual polymer plants, they provided

no assessment of the various controls and processes. This analysis, therefore, treats the BD polymer industry as a homogeneous sector in terms of exposures and the applicability of specific control measures.

According to JACA there are 54 process units using BD to process polymers and other miscellaneous chemicals. While some facilities contain

more than one of these process units, for the purposes of this analysis each process unit is treated as a separate facility. Thus, economies of scale arising from the joint hazard abatement by

several process units located at the same facility are not discussed.

The BD polymer producers employ approximately 4,554 workers with potential BD exposures (Ex. 30). An

estimate of the number of workers exposed on a given day over various ranges in the BD polymer industry is presented by job category in Table 25.

TABLE 25.—CURRENT EXPOSURE PROFILE—BD POLYMER AND MISCELLANEOUS CHEMICAL PRODUCTION¹

Occupational group	Numerical and percentage distribution of workers by concentration range (ppm)							Total
	<2 ²	<1	1-2	2-2.5	2.5-5	5-10	>10	
Process technician:								
Unloading.....	15	12	3	1	2	2	3	23
	63%	50%	13%	4%	10%	9%	14%	100%
Tank Farm.....	190	168	22	7	14	9	4	224
	85%	75%	10%	3%	6%	4%	2%	100%
Purification.....	63	25	38	32	172	229	140	636
	10%	4%	6%	5%	27%	36%	22%	100%
Polymerization or Reaction.....	554	532	22	6	6	6		572
	97%	93%	4%	1%	1%	1%	0%	100%
Solution or Coagulation.....	277	277						277
	100%	100%	0%	0%	0%	0%	0%	100%
Crumbling and Drying.....	133	133						133
	100%	100%	0%	0%	0%	0%	0%	100%
Control Room.....	271	268	3					271
	100%	99%	1%	0%	0%	0%	0%	100%
Packaging.....	381	377	4					381
	100%	99%	1%	0%	0%	0%	0%	100%
Warehousing.....	192	190	2					192
	100%	99%	1%	0%	0%	0%	0%	100%
Lab. technician:								
Analysis.....	369	334	35	9	26	18	18	440
	84%	76%	8%	2%	6%	4%	4%	100%
Other:								
Maintenance.....	1248	1166	82	27	42	27	27	1371
	91%	85%	6%	2%	3%	2%	2%	100%
Utilities.....	33	32	1	0	1			34
	96%	93%	3%	1%	3%	0%	0%	100%
Total.....	3726	3514	212	82	263	291	192	4554
	82%	77%	5%	2%	6%	6%	4%	100%

Source: JACA Corporation (Ex. 30).

¹ This is the estimated number of workers in each exposure grouping during any one day. Because of the variation of exposures, individual employees may fall in different groupings on different days.

² This column is the extent of workers' exposure below OSHA proposed PEL of 2 ppm.

C. Technological Feasibility

Four regulatory alternatives were considered to reduce occupational exposure to BD in these three industries: (1) The combination of a permissible exposure limit (PEL) of 10 parts per million (ppm) as an 8-hour time weighted average (TWA) and a short-term exposure limit (STEL) of 50 ppm as a 15-minute TWA, (2) the combination of a 5 ppm PEL and a 25 ppm STEL, (3) the combination of a 2 ppm PEL and a 10 ppm STEL, and, (4) the combination of a 1 ppm PEL and a 5 ppm STEL. Based upon its analysis of the alternatives, OSHA has preliminarily determined that compliance with the first three alternatives is technologically feasible primarily through the use of engineering and work practice controls although under each of these alternatives some additional respirator use will be necessary to protect some workers in difficult to control situations. The analysis also shows that compliance with the combination of a 1 ppm PEL and a 5 ppm STEL may not be

technologically feasible without the extensive use of respiratory protection. OSHA's analysis is in relative agreement with the report of Heiden and Associates for the Chemical Manufacturers Association, which indicated that a PEL of 10 ppm was technologically feasible through the use of engineering controls and work practices. Heiden also found that a PEL of 1 ppm was infeasible without extensive and routine use of respirators [Ex. 28-14].

OSHA's feasibility analysis is primarily based upon the work of PEI Associates as presented in the JACA report (Ex. 30). PEI has extensive experience in monitoring BD exposures and evaluating BD control technology. This experience, which includes conducting several walk through surveys of facilities (in the crude, monomer and polymer sectors) for EPA and NIOSH and developing several reports on the subject (Exs. 17-16, 17-18 & 17-34), has allowed PEI to compile an

extensive data base for the assessment of occupational exposures to BD.

Based upon these data, JACA recommended methods for meeting each of the regulatory alternatives. These recommendations are not a comprehensive guide on how specific plants could be brought into compliance with each regulatory alternative because there are minor differences among the facilities in each sector. Instead, this section is intended to illustrate the general techniques that could be utilized by a typical or "model" plant in each sector to meet the requirements of each alternative.

Both the crude BD and BD monomer production processes occur in closed systems and are highly automated. Operators are not routinely required to spend much time in the processing area and have relatively nominal exposures. Nonetheless, according to JACA, the following three operational categories present a serious potential for occupational exposure to BD:

1. Decontamination and maintenance of process equipment;
2. Sampling, handling, and analysis of quality control samples; and,
3. Loading and unloading of crude and refined BD.

The JACA report includes a detailed description of these operations.

There are three basic methods for processing BD into polymers (i.e., emulsion polymerization, solution polymerization and liquid or vapor phase reactions). These processes are similar in that they usually contain several of the following operations:

1. Unloading and storage of BD monomer;
2. Pre-treatment of the monomer to remove inhibitors or water;
3. Purification or recovery of excess unreacted monomer for recycling into to the process;
4. Post-treatment of the BD polymer to stabilize and purify the product; and,

5. Packaging of the final product for shipment. (Ex. 30)

A comparison of these operations with those of the crude BD and BD monomer facilities reveals several similarities. For example, both types of facilities use and have many of the same sources of potentially significant occupational exposure to BD (e.g. decontamination and maintenance of process equipment; sampling; handling, and analysis of quality control samples; and, loading and unloading of BD). However, since the BD polymer facilities have several types of operations that are not present at the crude BD and BD monomer facilities, they also have additional areas where there is a potential for excessive occupational exposure to BD, including the polymerization, reaction, purification, finishing, and packaging areas (Ex. 30).

According to JACA, it would be very difficult to achieve the 1 ppm PEL/5 ppm STEL regulatory alternative primarily

through the use of engineering and work practice controls. Such an alternative could only be met through the extensive and routine use of respirators. This position is also supported by the Heiden analysis of the monomer sector (Ex. 28-14). Thus, OSHA preliminarily concludes that it may not be feasible to achieve the 1 ppm PEL/5 ppm STEL regulatory alternative solely through engineering and work practice controls.

Based upon the JACA analysis, OSHA further concludes that the 10 ppm PEL/50 ppm STEL, the 5 ppm PEL/25 ppm STEL, and the 2 ppm PEL/10 ppm STEL are achievable primarily through the use of engineering and work practice controls, although some supplemental respiratory use may also be required during certain tasks. Tables 26 through 28 list these regulatory alternatives along with PEL's determinations of how each job category in each industry sector can meet these alternatives.

TABLE 26.—INCREMENTAL CONTROL REQUIREMENTS TO MEET THE 10 PPM PEL AND 50 PPM STEL REGULATORY ALTERNATIVE

[By industry sector, by classification]

Job category	Control requirements
Crude and Monomer Productions	
Process technicians:	
Railcar (monomer only)	Magnetic gauges.
Tank truck (monomer only)	Current controls are sufficient.
Tank farm	Closed-loop sampling devices.
Pump alley	Closed-loop sampling devices.
Control room	Current controls are sufficient.
Laboratory technicians:	
Analysis	Improved hoods & general ventilation.
Cylinder voiding	Vacuum exhaust ventilation or improved lab hoods.
Others:	
Maintenance	Current controls are sufficient.
Polymer Production	
Process technicians:	
Unloading	Magnetic gauges.
Tank farm	Closed-loop sampling devices.
Purification	Closed-loop sampling devices & respirators for 25% of workers.
Polymerization or reaction	Current controls are sufficient.
Solution or coagulation	Current controls are sufficient.
Crumbling and drying	Current controls are sufficient.
Control room	Current controls are sufficient.
Packaging	Current controls are sufficient.
Warehousing	Current controls are sufficient.
Laboratory technicians:	
Analysis	Vacuum exhaust, general ventilation, and improved laboratory hoods.
Others:	
Maintenance	Current controls are sufficient.
Utilities	Current controls are sufficient.

Source: JACA Corporation (Ex. 30)

TABLE 27.—INCREMENTAL CONTROL REQUIREMENTS TO MEET THE 5 PPM PEL AND 25 PPM STEL REGULATORY ALTERNATIVE

[By industry sector, by job classification]

Job category	Control requirements
Crude and Monomer Productions	
Process technicians:	
Railcar (monomer only)	Same controls as previous alternative.
Tank truck (monomer only)	Some respirator use for all workers.

TABLE 27.—INCREMENTAL CONTROL REQUIREMENTS TO MEET THE 5 PPM PEL AND 25 PPM STEL REGULATORY ALTERNATIVE—Continued

[By industry sector, by job classification]

Job category	Control requirements
Tank farm	Some respirator use for all workers.
Pump alley	Some respirator use for 25% of workers.
Control room	Current controls are sufficient.
Laboratory technicians:	
Analysis	Same controls as previous alternative.
Cylinder voiding	Some respirator use for all workers.
Others:	
Maintenance	Current controls are sufficient.
Polymer Production	
Process technicians:	
Unloading	Same controls as previous alternative.
Tank farm	Same controls as previous alternative.
Purification	Same controls (including respirators) as the previous alternative.
Polymerization or reaction	Current controls are sufficient.
Solution or coagulation	Current controls are sufficient.
Crumbing and drying	Current controls are sufficient.
Control room	Current controls are sufficient.
Packaging	Current controls are sufficient.
Warehousing	Current controls are sufficient.
Laboratory technicians:	
Analysis	Same controls as previous alternative.
Others:	
Maintenance	Current controls are sufficient.
Utilities	Current controls are sufficient.

Source: JACA Corporation (Ex. 30)

TABLE 28.—INCREMENTAL CONTROL REQUIREMENTS TO MEET THE 2 PPM PEL AND 10 PPM STEL REGULATORY ALTERNATIVE

[By industry sector, by job classification]

Job category	Control requirements
Crude and Monomer Productions	
Process technicians:	
Railcar (monomer only)	Some respirator use for all workers.
Tank truck (monomer only)	Some respirator use for all workers.
Tank farm	Some respirator use for all workers.
Pump alley	Some respirator use for 25% of workers.
Control room	Some respirator use for 25% of workers.
Laboratory technicians:	
Analysis	Some respirator use for all workers.
Cylinder voiding	Some respirator use for all workers.
Others:	
Maintenance	Some respirator use for 10% of workers.
Polymer Production	
Process technicians:	
Unloading	Some respirator use for all workers.
Tank farm	Some respirator use for all workers.
Purification	Some Full-face air-Purifying respirator.
Polymerization or reaction	Use for 25% of workers.
Solution or coagulation	Current controls are sufficient.
Crumbing and drying	Current controls are sufficient.
Control room	Current controls are sufficient.
Packaging	Current controls are sufficient.
Warehousing	Current controls are sufficient.
Laboratory technicians:	
Analysis	Some respirator use for 50% of workers.
Others:	
Maintenance	Some respirator use for 10% of workers.
Utilities	Current controls are sufficient.

Source: JACA Corporation (Ex. 30)

As an important component of engineering controls, JACA assumed that leak detection and repair programs, which require periodic monitoring using

an organic vapor analyzer (as well as a strip chart recorder and a gas chromatograph), would be used by all facilities to meet the 5 ppm PEL/25 ppm

STEL and 2 ppm PEL/10 ppm STEL regulatory alternatives. Thus, JACA concluded that most of the potentially hazardous occupational exposures from

leaks that emanate from pumps and compressors would be detected before any substantial amounts of BD accumulates. It may be the case, however, that in some circumstances, continuous monitoring with an alarm system might be a more effective means to control worker exposures. OSHA believes that continuous monitoring would alert employers and employees to leaks instantaneously, and consequently appropriate action would be undertaken without undue delay. JACA did not consider the technological or economic feasibility of this particular control, and OSHA solicits comments on its appropriateness in the industries that will be affected by this standard.

JACA does not foresee the immediate need for an extensive replacement or retrofitting of existing pumps and compressors with dual mechanical seals because workers typically spend the majority of the day away from this equipment. Thus, JACA believes that dual mechanical seals—while an effective environmental control—would, under the present set of circumstances, have little effect on occupational exposures.

An examination of Tables 26 through 28 reveals that JACA recommended some additional respirator use for all three regulatory alternatives. For the 10 ppm PEL/50 ppm STEL alternative, additional respirators will be required only in the BD polymer sector and not in the crude BD and BD monomer sectors. For the 5 ppm PEL/25 ppm STEL and the 2 ppm/10 ppm STEL, additional respirator use will be required in all three sectors. In general, JACA recommended that respirators be used during operations such as sample collection, cylinder voiding, loading and unloading, and maintenance.

JACA determined that the majority of workers will be protected without the use of respirators under all three alternatives. Moreover, since no worker would be required to wear a respirator for an entire 8-hour shift and since only a fraction of the workers in some job categories may routinely need to use respirators, OSHA estimated the percentage of a typical work day that engineering and work practice controls would provide sufficient protection for workers under PELs of 10 ppm, 5 ppm, and 2 ppm. These estimates are

presented in Table 29 and show the amount of time that respirator use is required in order to meet a given PEL. Another way to conceptualize the data presented in Table 28 involves the notion of "full time equivalent workers" requiring respirator protection. Since no worker would be required to wear respirators for an entire 8-hour shift, the number of full time equivalent workers required to use respirators is estimated by multiplying the number of workers required to wear respirators by the portion of their typical work-day that would be spent in respirators. For example, if four workers were required to wear a respirator 25 percent of each day, then this would be equivalent to one full time respirator user. Table 30 shows that in no specific job category does the number of full-time equivalent workers in respirators exceed 50 percent of the number of workers. In fact, under the proposed 2 ppm PEL regulatory alternative the number of full-time equivalent workers in respirators is less than 15 percent of the exposed work force in each of the three industry sectors.

TABLE 29.—1,3-BUTADIENE RESPIRATOR USE—PROJECTED NUMBER OF WORKERS AND TIME IN RESPIRATORS UNDER VARIOUS PELs¹

[By industry sector, by job classification]

Job category ²	Respirator usage under the following PELs-						
	Total employ	PEL = 10 ppm		PEL = 5 ppm		PEL = 2 ppm	
		Number of Wkrs.	(Percent of time)	Number of Wkrs.	(Percent of time)	Number of Wkrs.	(Percent of time)
Crude Production							
Process technicians:							
Tank farm	29	0	(0.0%)	29	(17.5%)	29	(17.5%)
Pump alley	232	0	(0.0%)	58	(17.5%)	58	(17.5%)
Control room	87	0	(0.0%)	0	(0.0%)	22	(37.5%)
Laboratory technicians:							
Analysis	58	0	(0.0%)	0	(0.0%)	58	(25.0%)
Cylinder voiding	58	0	(0.0%)	58	(37.5%)	58	(37.5%)
Other: Maintenance	116	0	(0.0%)	0	(0.0%)	12	(62.5%)
Sector total	580	0		145		236	
Monomer Production							
Process technicians:							
Railcar	52	0	(0.0%)	0	(0.0%)	52	(25.0%)
Tank truck	8	0	(0.0%)	8	(50.0%)	8	(50.0%)
Tank farm	36	0	(0.0%)	36	(17.5%)	36	(17.5%)
Pump alley	166	0	(0.0%)	42	(17.5%)	42	(17.5%)
Control room	47	0	(0.0%)	0	(0.0%)	12	(37.5%)
Laboratory technicians:							
Analysis	36	0	(0.0%)	0	(0.0%)	36	(25.0%)
Cylinder voiding	36	0	(0.0%)	36	(37.5%)	36	(37.5%)
Other: Maintenance	174	0	(0.0%)	0	(0.0%)	17	(62.5%)
Sector total	555	0		122		239	
Polymer and Miscellaneous Chemical Production							
Process technicians:							
Unloading	23	0	(0.0%)	0	(0.0%)	23	(25.0%)
Tank Farm	224	0	(0.0%)	0	(0.0%)	224	(17.5%)
Purification	636	159	(17.5%)	159	(17.5%)	159	(17.5%)
Polymerization or reaction	572	0	(0.0%)	0	(0.0%)	0	(0.0%)

TABLE 29.—1,3-BUTADIENE RESPIRATOR USE—PROJECTED NUMBER OF WORKERS AND TIME IN RESPIRATORS UNDER VARIOUS PELs¹—Continued

[By industry sector, by job classification]

Job category ²	Respirator usage under the following PELs-						
	Total employ	PEL = 10 ppm		PEL = 5 ppm		PEL = 2 ppm	
		Number of Wkrs.	(Percent of time)	Number of Wkrs.	(Percent of time)	Number of Wkrs.	(Percent of time)
Solution or coagulation.....	277	0	(0.0%)	0	(0.0%)	0	(0.0%)
Crumbing and Drying.....	133	0	(0.0%)	0	(0.0%)	0	(0.0%)
Control room.....	271	0	(0.0%)	0	(0.0%)	0	(0.0%)
Packaging.....	381	0	(0.0%)	0	(0.0%)	0	(0.0%)
Warehousing.....	192	0	(0.0%)	0	(0.0%)	0	(0.0%)
Laboratory Technician:Analysis.....	440	0	(0.0%)	0	(0.0%)	220	(25.0%)
Other:							
Maintenance.....	1,371	0	(0.0%)	0	(0.0%)	137	(62.5%)
Utilities.....	34	0	(0.0%)	0	(0.0%)	0	(0.0)
Sector total.....	4,554	159		159		763	
Total.....	5,689	159		426		1,238	

¹ Figures assume that all feasible engineering controls and work practices are in place.² Note that these job categories are not consistent with those of Matanoski (Ex.9). For example, Matanoski included some tank farm workers in the "other maintenance" category, while PEI separated these two groups.

Source: Based upon PEI feasibility analysis. [2, Chapt. 3].

TABLE 30.—1,3-Butadiene Respirator Use Number of Full-Time Equivalent Workers in Respirators Under Various PELs

[By industry sector, by classification]

Job category	Number of workers	Full-time equivalent in respirators under the following PELs—		
		10 ppm	5 ppm	2 ppm
Crude Production				
Process Technicians:				
Tank farm.....	29	0	5	5
Pump alley.....	232	0	10	10
Control room.....	87	0	0	8
Laboratory technicians:				
Analysis.....	58	0	0	15
Cylinder voiding.....	58	0	22	22
Other: Maintenance.....	116	0	0	7
Sector total.....	580	0	37	67
Monomer Production				
Process Technicians:				
Railcar.....	52	0	0	13
Tank truck.....	8	0	4	4
Tank farm.....	36	0	6	6
Pump alley.....	166	0	7	7
Control room.....	47	0	0	4
Laboratory technicians:				
Analysis.....	36	0	0	9
Cylinder voiding.....	36	0	14	14
Other: Maintenance.....	174	0	0	11
Sector total.....	555	0	31	68
Polymer and Miscellaneous Chemical Production				
Process technicians:				
Unloading.....	23	0	0	6
Tank farm.....	224	0	0	39
Purification.....	636	28	28	28
Polymerization or reaction.....	572	0	0	0
Solution or coagulation.....	277	0	0	0
Crumbing and Drying.....	133	0	0	0
Control room.....	271	0	0	0
Packaging.....	381	0	0	0
Warehousing.....	192	0	0	0
Laboratory technicians: Analysis.....	440	0	0	55
Other:				
Maintenance.....	1371	0	0	86
Utilities.....	34	0	0	0
Sector total.....	4,554	28	28	213

TABLE 30.—1,3-Butadiene Respirator Use Number of Full-Time Equivalent Workers in Respirators Under Various PELs—Continued

[By industry sector, by classification]

Job category	Number of workers	Full-time equivalent in respirators under the following PELs—		
		10 ppm	5 ppm	2 ppm
Total.....	5,689	28	96	349

Source: U.S. Department of Labor, OSHA, ORA.

Based upon available data and the supporting documentation presented in the JACA report (Ex. 30), OSHA preliminarily concludes that it can not demonstrate the feasibility of achieving the 1 ppm PEL/5 ppm STEL regulatory alternative primarily through the use of

engineering and work practice controls. OSHA further concludes that achievement of the 10 ppm PEL/50 ppm STEL, the 5 ppm PEL/25 ppm STEL and the 2 ppm PEL/10 ppm STEL is technologically feasible through the use of engineering and work practice

controls, although some additional respirator protection use will be required. The anticipated changes in BD exposures resulting from each of the latter three feasible regulatory alternatives are presented in Table 31.

TABLE 31.—1,3-BUTADIENE EXPOSURE PROFILE—NUMBER OF WORKERS, CURRENT AND PROJECTED 8-HOUR TWA EXPOSURE MEANS UNDER VARIOUS PEL'S

[By industry sector, by job classification]

Job category	Number of workers	Projected 8-hour TWA exposure means for the following PELs—			
		10 ppm	5 ppm	2 ppm	Current exposures
Crude and Monomer Sectors					
Process technicians:					
Railcar*	52	1.16	1.16	0.24	14.64
Tank truck*	8	2.65	0.53	0.53	2.65
Tank farm	65	0.44	0.13	0.13	0.44
Pump alley	398	2.23	0.38	0.38	2.23
Control room	134	0.45	0.45	0.17	0.45
Laboratory technicians:					
Analysis	94	0.36	0.36	0.08	1.06
Cylinder voiding	94	2.42	0.48	0.48	125.32
Other: Maintenance	290	1.37	1.37	0.21	1.37
Sector total	1,135				
Polymer and Miscellaneous Chemical Production					
Process technicians:					
Unloading	23	1.16	1.16	0.24	14.64
Tank farm	224	0.46	0.46	0.10	2.08
Purification	636	0.94	0.94	0.47	7.80
Polymerization or reaction	572	0.41	0.41	0.41	0.41
Solution or coagulation	277	0.05	0.05	0.05	0.05
Crumbing and drying	133	0.03	0.03	0.03	0.03
Control room	271	0.03	0.03	0.03	0.03
Packaging	381	0.04	0.04	0.04	0.04
Warehousing	192	0.02	0.02	0.02	0.02
Laboratory technicians: Analysis	440	0.31	0.31	0.05	2.24
Other:					
Maintenance	1,371	1.06	1.06	0.21	1.06
Utilities	34	0.12	0.12	0.12	0.12
Sector total	4,554				
Total employment	5,689				

*Railcar and tank truck workers are unique to the BD monomer sector.

Source: Job categories and number of workers obtained from PEL.

Arithmetic means under current conditions obtained from PEL.

Arithmetic means under revised PEL's calculated from geometric statistics provided by PEL. [Ex. 30]

D. Benefits Analysis

The primary benefit of revising the OSHA standard for occupational exposure to BD will be the reduction in

the incidence of BD related deaths and illnesses. Based upon current industry exposure levels and OSHA's preferred quantitative risk assessment (QRA) for

cancer, OSHA estimates that approximately 25 cancer deaths related to occupational exposure to BD will occur over the next 45 years. Lowering

the PEL from the current level of 1,000 ppm to 10 ppm will prevent 14 (i.e., 56 percent) of the expected cancer deaths, lowering the PEL to 5 ppm will prevent 16.5 (i.e., 65 percent) of the expected cancer deaths, and lowering the PEL to 2

ppm will prevent 22 (i.e., 87 percent) of the expected cancer deaths. Table 32 provides a breakdown of the expected cancer deaths avoided under each of the regulatory alternatives. In addition to the estimated cancer reductions, OSHA

anticipates that lowering the PELs for BD will reduce other adverse health effects (eg., teratogenic and reproductive effects), which can not be quantified at this time.

TABLE 32.—ESTIMATED NUMBER OF CANCER DEATHS PREVENTED OVER 45 YEARS UNDER VARIOUS 1,3-BUTADIENE PELs

[By industry sector, by job classification]

Job category	Estimated cancer deaths under current conditions	Estimated deaths prevented under following PELs—		
		10 ppm	5 ppm	2 ppm
Crude 1,3-Butadiene				
Process technicians:				
Tank farm	0.03	0.00	0.02	0.02
Pump alley	1.33	0.00	1.11	1.11
Control room	0.10	0.00	0.00	0.06
Laboratory technicians:				
Analysis	0.16	0.10	0.10	0.13
Cylinder voiding	2.89	2.54	2.82	2.82
Other: Maintenance	0.41	0.00	0.00	0.35
Sector total	4.92	2.64	4.05	4.49
1,3-Butadiene Monomer				
Process technicians:				
Railcar	0.82	0.67	0.67	0.79
Tank truck	0.05	0.00	0.04	0.04
Tank farm	0.04	0.00	0.03	0.03
Pump alley	0.95	0.00	0.79	0.79
Control room	0.05	0.00	0.00	0.03
Laboratory technicians:				
Analysis	0.10	0.06	0.06	0.09
Cylinder voiding	1.79	1.58	1.75	1.75
Other: Maintenance	0.62	0.00	0.00	0.52
Sector total	4.42	2.31	3.34	4.04
Polymer and Miscellaneous Chemical Production				
Process technicians:				
Unloading	0.36	0.29	0.29	0.35
Tank farm	1.21	0.94	0.94	1.15
Purification	7.18	5.63	5.63	6.40
Polymerization or reaction	0.61	0.00	0.00	0.00
Solution or coagulation	0.04	0.00	0.00	0.00
Crumbling and drying	0.01	0.00	0.00	0.00
Control room	0.02	0.00	0.00	0.00
Packaging	0.04	0.00	0.00	0.00
Warehousing	0.01	0.00	0.00	0.00
Laboratory technicians: Analysis	2.54	2.19	2.19	2.48
Other: Maintenance	3.76	0.00	0.00	3.01
Utilities	0.01	0.00	0.00	0.00
Sector total	15.79	9.05	9.05	13.39
Total	25.13	14.00	16.44	21.92

Source: U.S. Department of Labor, OSHA, ORA.

E. Cost of Compliance

OSHA estimates that compliance with the 10 ppm PEL/50 ppm STEL will result in annualized costs of approximately

\$0.9 million, compliance with the 5 ppm PEL/25 ppm STEL will result in annualized costs of approximately \$1.5 million, and, compliance with the 2 ppm PEL/10 ppm STEL will result in

annualized costs of approximately \$3.2 million. Table 33 provides a breakdown of the compliance costs by provision for each of the regulatory alternatives.

TABLE 33.—SUMMARY OF COMPLIANCE COSTS BY REGULATORY ALTERNATIVE, PROVISION AND INDUSTRY

[Thousands of 1987 dollars]

Provision	Industry sector			
	Crude	Monomer	Polymer	Total
10 ppm PEL, 50 ppm STEL and 5 ppm Action Level				
Engineering controls.....	99.2	73.7	183.8	356.7
Exposure monitoring.....	55.9	30.5	82.6	169.0
Medical surveillance.....	4.9	4.2	10.8	19.9
Respirators and tests.....	0.0	0.0	323.1	323.1
Information and training.....	1.5	0.8	4.9	7.2
Recordkeeping.....	6.7	2.9	13.7	23.2
Total industry costs.....	168.2	112.1	618.9	899.2
5 ppm PEL, 25 ppm STEL and 2.5 ppm Action Level				
Engineering controls.....	138.9	85.8	260.5	485.2
Exposure monitoring.....	72.2	37.0	84.9	194.1
Medical surveillance.....	9.9	8.2	23.0	41.1
Respirators and tests.....	235.4	210.2	323.1	768.7
Information and training.....	1.9	1.2	8.4	11.5
Recordkeeping.....	7.0	3.1	15.5	25.6
Total industry costs.....	465.3	345.5	715.4	1,526.2
2 ppm PEL, 10 ppm STEL and 1 ppm Action Level				
Engineering controls.....	138.9	85.8	260.5	485.2
Exposure monitoring.....	92.2	48.8	104.4	245.4
Medical surveillance.....	19.7	19.1	37.2	76.0
Respirators and tests.....	362.0	411.3	1,551.3	2,324.6
Information and training.....	2.9	2.3	12.4	17.6
Recordkeeping.....	7.5	3.6	17.5	28.6
Total industry costs.....	623.2	570.9	1,983.3	3,177.4

Source: Based on JACA (Ex. 30).

Under all three alternatives, respirators and engineering controls account for the preponderance of the costs. Respirators account for approximately 39 percent of the compliance costs under the 10 ppm PEL/50 ppm STEL alternative, 52 percent of the compliance costs under the 5 ppm PEL/25 ppm STEL alternative, and 73 percent of the compliance costs under the 2 ppm PEL/10 ppm STEL alternative. Engineering controls account for approximately 40 percent of the compliance costs under the 10 ppm PEL/50 ppm STEL alternative, 32 percent of the compliance costs under the 2 ppm PEL/10 ppm STEL alternative, and, 15 percent of the compliance costs under the 2 ppm PEL/10 ppm STEL alternative.

A comparison of these estimates with other comments submitted to the record reveals general agreement on the unit costs, but disagreement on the total costs. The report by Heiden and Associates (Ex. 28-14), which is based on an extensive survey of the 12 monomer facilities, illustrates this point.

There were three common controls described in Exhibit III-2 of the Heiden report and in the JACA recommendations: closed-loop sampling devices, magnetic tanks car gauges and leak detection devices. JACA estimated

the capital cost of the closed-loop sampling devices to be \$1,409 as compared to the Heiden estimate of \$2,000. JACA estimated the capital cost of the magnetic gauges to be \$2,800 as compared to the Heiden estimate of \$1,450. And, JACA estimated the capital cost of the leak detection devices to be \$7,000 which is identical to the Heiden estimate for valve/source monitoring. In addition, Heiden's estimate that 40 to 50 percent (5 or 6 plants out of 12) of the monomer facilities would require additional controls compares quite favorably with JACA's estimate that 50 to 75 percent of the additional controls would be required by the typical or model plant. Finally, both Heiden and JACA agree that additional respirator use will not be required under a 10 ppm PEL and that a 1 ppm PEL is infeasible without routine and extensive respirator use.

A comparison of the Heiden and JACA industry-wide compliance costs, however, does not indicate general agreement. Although, both Heiden and JACA developed compliance estimates for three PELs, the only PEL that they both studied was 10 ppm. This is because Heiden did not examine PELs between 10 ppm and 1 ppm, and, JACA did not develop cost estimates for PELs

below the lowest feasible level (i.e., 2 ppm). In fact, OSHA finds it difficult to assess the meaning of Heiden's compliance cost estimates for the 1 ppm and 0.1 ppm PELs when Heiden says that achieving these levels is not feasible.

Heiden estimated that the BD monomer industry (including loading terminal operations) would incur approximately \$967,400 in annualized engineering control costs to meet the 10 ppm PEL as compared to the JACA estimate of \$107,900. Thus Heiden estimates that the engineering costs will be about nine times greater than the JACA estimate.

An analysis of these estimates reveals that the major difference between the two is that the Heiden estimate is based on the use of a far greater variety of engineering controls than was recommended by PEL. PEL's rationale for not recommending many of the controls in the Heiden survey is as follows:

Several additional types of controls (such as purge facilities for sphere and tank gauges or closed tank gauging and drain facilities, valve elimination and upgrade, improved fugitive emission programs, and use of rupture disks) were also reported in a recent survey of monomer production plants by Heiden Associates * * * Such controls were not included in this report because they were

generally considered to be effective in controlling environmental releases, and not believed to have any significant impact on reducing occupational exposures. (Ex. 30)

In other words, since the OSHA regulatory alternatives do not place limits on environmental releases, JACA did not include controls that would reduce emissions in areas where workers are not present. In addition, unlike JACA, Heiden made no effort to develop a control strategy which utilized the low cost or "best available technology" (BAT). For example (as explained earlier), JACA did not suggest replacing or retrofitting existing pumps with dual mechanical seals (an expensive control recommended by Heiden), because under a 10 ppm PEL, JACA determined that the emissions from the pumps did not represent a significant occupational exposure problem, and, under the two lower PELs, JACA determined that the emissions could effectively be controlled with a leak detection program.

F. Economic Impacts and Regulatory Flexibility

OSHA examined the potential economic impacts of the regulatory alternatives on typical firms in each industry sector, based upon an analysis of compliance cost to revenue and profit ratios. If none of the compliance costs could be passed forward to customers, then the profit declines in the product lines impacted by the alternative BD standards would not exceed five percent for a typical firm in each of the industry sectors. If all of the compliance costs were to be passed forward to customers in order to leave profits unchanged, then the required revenue increases from the product lines impacted by the alternative BD standards would not exceed one tenth of one percent for an average firm in each industry sector. Since the analysis indicates that the size of the compliance costs are small in relation to both profits and revenues under these extreme or "bounding" cases (i.e., it is likely that some of the costs would be passed forward to customers and some absorbed), OSHA has preliminarily determined that these costs are economically feasible for typical firms in each of the industry sectors.

Finally, in accordance with the Regulatory Flexibility Act, OSHA examined the impact of the regulatory alternatives on small firms and has preliminarily determined that there will not be any adverse economic impacts on small firms in the industries under any of the three technologically feasible regulatory alternatives. CMA (Ex. 28-14) and JACA (Ex. 30) have provided lists of

the firms engaged in the manufacture of crude BD and BD monomer. Correlating this list with public financial data reveals that most firms in these sectors are of substantial size in terms of both gross revenue and number of employees. In addition, since JACA reports that many of the facilities in these sectors are extremely similar in terms of age, size and capacity (Ex. 30), it is extremely unlikely that there will be any adverse differential impacts of small entities in the crude BD and BD monomer sectors.

JACA (Ex. 30) has also provided lists of the firms engaged in the manufacture of various BD polymers. Once again, correlating this list with public financial data reveals that most firms are of substantial size in terms of both gross revenue and number of employees. While there is substantial variation in the size of individual facilities in the BD polymer sector, a further examination of the lists of BD2 polymer producers reveals that the plants with the smallest reported capacities (i.e., less than a million pounds annually) are facilities of large corporations (eg., Goodyear Tire and Rubber, and, Occidental Petroleum).

Thus OSHA preliminarily concludes that the three regulatory alternatives will not have an adverse differential impact on small entities in any of the three potentially impacted sectors.

IX. Conclusion and Permissible Exposure Limit

OSHA considered the regulatory alternatives for 8-hour TWAs of 10 ppm, 5 ppm, 2 ppm, and 1 ppm, with corresponding STELs of 50 ppm, 25 ppm, 10 ppm, and 5 ppm. As discussed above in the significance of risk section, OSHA's preliminary risk assessment shows an excess cancer risk of 147 deaths per 1,000 workers over a 45-year working lifetime at the current PEL of 1,000 ppm. This risk is clearly significant. The proposal to reduce exposures to 2 ppm will achieve approximately a 97% reduction in risk or 142 lives saved per 1,000 workers who would have been exposed to a working lifetime exposure at current PEL of 1,000 ppm. This reduction in risk achieved by lowering the PEL to 2 ppm is clearly substantial.

In 1986, the Court of Appeals for the District of Columbia, in reviewing the ethylene oxide standard, held that: "If in fact a STEL would further reduce a significant health risk and is feasible to implement, then the OSH Act compels the agency to adopt it (barring alternative avenues to the same result)." *Public Citizen Health Research Group v. U. Tyson*, 796 F.2d 1479 (D.C. Cir. 1986). OSHA has found that significant risk of

BD-related cancer exists at cumulative exposures below the proposed PEL. Compliance with a STEL would further reduce such risks by reducing the chance that air in the workplace will contain high levels of BD as a result of high short term BD exposures. The level of the STEL in this proposal, five times the PEL, is consistent with standards for other substance such as benzene which was recently promulgated by OSHA.

As discussed above in the technological and economic feasibility sections, OSHA's analysis shows that a regulatory alternative of 1 ppm PEL/5 ppm STEL is not technologically feasible without the extensive use of respiratory protection. It also shows that under a 10 ppm PEL/50 ppm STEL, engineering and work practice controls would be adequate 99.5 percent of the time during which respiratory protection would not be required, while under 5 ppm PEL/25 ppm STEL and 2 ppm PEL/10 ppm STEL, the percentages of time compliance could be met by engineering and work practice controls alone are 98.3% and 92.1%, respectively. OSHA estimates that compliance with the 10 ppm PEL/50 ppm STEL will result in annualized costs of approximately \$0.9 million, while for compliance with 5 ppm PEL/25 ppm STEL and 2 ppm PEL/10 ppm STEL, the annualized costs would be approximately \$1.5 million and \$3.2 million, respectively. Since the analysis indicates that the size of the compliance costs is small in relation to both profits and revenues, OSHA has preliminarily determined that these costs are economically feasible for typical firms in each of the industry sectors. A proposed standard higher than 2 ppm PEL/10 ppm STEL may be less expensive but would also be less protective and the predicated risks of excess cancer death would be substantially greater. Conversely, a proposed standard lower than 2 ppm PEL/10 ppm STEL would be more expensive and may be technologically and economically infeasible for many operations, with too many workers wearing respirators most of the time. Extensive respiratory use is not an effective control technique. OSHA believes that a proposed standard of 2 ppm PEL/10 ppm STEL is technically and economically feasible based on data indicating that several industries or industry segments are presently controlling exposures to or very near this level.

An action level of 1 ppm is included in the proposal of 2 ppm PEL/10 ppm STEL. OSHA believes many employers will choose to achieve the action level 1 ppm with engineering and work practice

controls, in order to save on the cost of monitoring, industrial hygiene and medical provisions which are required for employees exposed over the 1 ppm action level. For workplaces with BD exposures below the action level of 1 ppm, such requirements will not be triggered. Thus employers will have a strong incentive to reduce exposures below the action level.

OSHA believes that industrial hygiene measures such as engineering and work practice controls and personal protective equipment as well as monitoring, training, and medical surveillance provisions will provide substantial but not complete additional protection for employees exposed between 2 ppm and 1 ppm. Respirators are permitted to be used in certain situations where engineering controls are deemed to be infeasible (i.e., maintenance) will provide further protection. Compliance with these provisions will result in less exposure to employees.

In light of the above, OSHA is proposing a standard of 2 ppm PEL/10 ppm STEL with a 1 ppm action level to substantially reduce a significant risk of cancer as low as is technologically and economically feasible. The Agency will, of course, consider all evidence presented in the rulemaking on issues presented including alternative exposure limits.

XI. Summary and Explanation of the Proposed Standard:

OSHA believes that the proposed requirements set forth in this notice are those which, based on currently available data, are necessary and appropriate to provide adequate protection to employees exposed to BD. In the development of the proposal, OSHA has considered all recommendations received in response to the ANPR as well as numerous reference works, journal articles, and other data accumulated by OSHA since initiation of this rulemaking.

A. Scope and Application: Paragraph (a)

This proposed standard would apply to all workplaces in all industries, including construction and maritime as well as general industry, where BD is produced, released, stored, handled, used, or transported, and over which OSHA has jurisdiction. An exemption provision, however, has been provided in the proposal.

This section does not apply to the processing, use, and handling of products containing BD where objective data demonstrate that the product cannot release BD above the action level under the expected conditions of

processing, use, and handling which will cause the greatest possible release. It is likely that in a number of products made from, containing or treated with BD, there may be insignificant residual BD present to the extent that minimal exposure would be expected. This determination (that air concentrations will not exceed the action level) need not be based on data generated by the processor but may, for example, be based upon information provided by the manufacturer. The provision enables fabricators or users of products made from, containing or treated with BD to avoid the burdens of compliance with the standard where exposures are minimal.

It should be noted that where objective data are not available to satisfy the condition for exemption, the employer is required to perform, at the very least, initial monitoring of employee exposures to BD. If the results of initial monitoring indicate employee exposures are below the action level, the employer may discontinue monitoring for those employees and is relieved of other obligations under the proposal, except for the labeling requirements in paragraph (j). Thus, even if operations are not specifically exempted from the proposal, keeping exposure levels below the 1 ppm "action level" will relieve many employers from further duties under the standard. This provision has been incorporated in a number of OSHA standards (acrylonitrile 29 CFR 1910.1045; 43 FR 45809 (1978); arsenic 29 CFR 1910.1018; 43 FR 19624 (1978), ethylene oxide 29 CFR 1910.1047; 49 FR 5796 (1984); 53 FR 11413 (1988)).

It should be noted that while the Hazard Communication standard generally exempts materials containing less than 0.1 percent of a potential carcinogen (as defined in that standard), any material containing BD that is capable of causing exposure is covered even if the 0.1 percent exemption applies. The Hazard Communication Standard would apply if the exposures present a health hazard even if the exposure is less than the PEL. While these uses of BD would not be covered under the BD proposal, they would still require labeling and other provisions under the Hazard Communication standard. (29 CFR 1910.1200(d)(5)(iv)).

B. Definitions: Paragraph (b)

An "action level" of 1 ppm (8-hour time-weighted average), is provided in the proposal. The purpose of the action level is to relieve the burden on employers by providing a cut-off point for required compliance activities under the standard. In addition, due to the

variable nature of employee exposures to airborne concentration of BD, the concept of an action level provide a means by which the employee may have greater assurance that the employees will not be exposed to BD over the PEL.

The action level also increases the cost-effectiveness and performance orientation of the standard while improving employee protection. Employers who can, in a cost-effective manner, come up with innovative methodology to reduce exposures below the action level, will be encouraged to do so in order to save on the expenses for the monitoring and medical surveillance provisions of the standard. Their employees will be further protected because their exposures will be less than half of the permissible exposure limit. When employers do not lower exposures below the action level, employees above the action level will have protection of medical surveillance, monitoring and other provisions of the standard to give further protection from the effects of BD.

The statistical basis for using an "action level" has been discussed in connection with several other OSHA health standards (see, for example, acrylonitrile (29 CFR 1910.1045; 43 FR 45809 (1978)). In brief, although all measurements on a given day may fall below the permissible exposure limit, some possibility exists that on unmeasured days the employee's actual exposure may exceed the permissible limit. Where exposure measurements are above the action level, the employer cannot reasonably be confident that the employee may not be overexposed. Therefore, requiring periodic employee exposure measurements to begin at the action level provides the employer with a reasonable degree of confidence in the results of his measurement program (Ex. 23-67). OSHA's specific choice of setting an action level of one-half the PEL is based on its successful experience in utilizing one-half the PEL as the action level in many standards, such as arsenic, ethylene oxide, vinyl chloride and benzene.

The action level provides a way of maximizing employee protection in those instances where exposures are possibly significant, and minimizing employer obligations by defining the point below which no action is necessary. Use of the action level concept will result in the necessary inclusion of employees under the proposed standard, whose exposures are above the action level and for whom further protection is warranted. The action level mechanism will also greatly limit the number of workplaces covered

under the standard because employers whose employees are under the action level will be exempt from most provisions of the standard. The action level concept therefore provides an objective means of tailoring different sections of the standard to those employees who are at the greatest risk of developing adverse health effects from exposure to BD.

The chemical "1,3-butadiene" (Chemical Abstracts Registry Number 106-99-0) is a colorless, noncorrosive, flammable gas with a mild aromatic odor at standard ambient temperature and pressure. It has a chemical formula of C_4H_6 , a molecular weight of 54.1, and a boiling point of -4.7°C at 760 mm Hg, a lower explosive limit of 2%, and an upper explosive limit of 11.5%. Its vapor density is almost twice that of air. It is slightly soluble in water, somewhat soluble in methanol and ethanol, and readily soluble in less polar organic solvents such as hexane, benzene, and toluene. It is highly reactive, dimerizes to 4-vinylcyclohexene, and polymerizes easily. Because of its low odor threshold, high flammability and explosiveness, BD has been handled with extreme care in the industry.

"Day" is defined as any part of a calendar day. Therefore, if a requirement is applicable for an employee who is exposed to BD for 10 days in a calendar year, that requirement becomes applicable to an employee who is exposed to BD for any part of each of 10 calendar days in a year.

"Director" means the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services or designee.

A definition of the term "emergency" is included in the proposed standard. For the purposes of the standard, emergencies are occurrences such as, but not limited to, equipment failure, rupture of container, or failure of control equipment which may or do, result in unexpected significant releases of BD. Sections of the proposed standard that include provisions that must be met in case of emergencies include Respiratory Protection, Medical Surveillance, and Employee Information and Training. Every spill or leak does not automatically constitute an emergency situation. The exposure to employees must be high and unexpected. This is a performance oriented provision relying on judgment. It is not possible to specify detailed circumstances which constitute an emergency.

"Employee exposure" is defined as that exposure to airborne BD which would occur if the employee were not using respiratory protective equipment.

This definition is consistent with OSHA's previous use of the term "employee exposure" in other health standards.

"Regulated area" means areas where airborne concentrations of BD are in excess of the permissible exposure limit. This is explained in the Regulated Area discussion below.

C. Permissible Exposure Limit: Paragraph (c)

OSHA proposes to revise the PEL for BD by deleting the current 1,000 ppm standard contained in 29 CFR 1910.1000, Table Z-1 and setting an 8-hour time weighted average exposure limit of 2 ppm. This proposed PEL is based on underlying findings by OSHA that occupational exposure to BD under current permissible exposure levels presents a significant risk to employees and that the new standard will achieve a substantial reduction in that risk.

The basis for the 8-hour permissible exposure limit is discussed above in the sections on significant risk, feasibility and choice of exposure limit. OSHA believes lowering the current PEL to 2 ppm TWA substantially reduces a significant risk and is feasible for industry to achieve.

Short Term Exposure Limit (STEL): OSHA proposes a Short Term Exposure Limit (STEL) of 10 ppm BD for 15 minutes. This proposal is based on animal data which indicate that short-term exposure to BD induces a stronger carcinogenic response than does long-term exposure at a lower equivalent dose (Ex. 29-4). There are epidemiological data which suggest this same relationship (Exs. 2-27 and 23-22).

The National Toxicology Program has conducted a second two-year inhalation bioassay to measure the carcinogenic potency of BD in B6C3F₁ mice. At present, only data from early death animals (through week 65) and interim sacrifices have been presented (Ex. 29-4). As part of that bioassay, groups of mice were used for a stop-exposure study. That is, groups of mice were exposed to equivalent cumulative doses of BD but under different exposure scenarios. One group of male mice was exposed to 312 ppm BD for 52 weeks (16,224 ppm-weeks), while a second group was exposed to 625 ppm BD for 26 weeks (16,250 ppm-weeks). The incidence of lymphoma was markedly reduced in the former group as compared to the latter. This indicates that equivalent cumulative doses of BD do not induce equivalent carcinogenic responses. OSHA is proposing a STEL for BD because the incidence of cancer from BD exposure does not depend on cumulative dose alone.

The epidemiological evidence suggests this same conclusion. As discussed in the carcinogenic health effects of this preamble, in a study of 13,920 styrene-butadiene rubber workers, the highest standardized mortality ratio (SMR) for all lymphohematopoietic cancers was observed in utility workers (Obs=5; Exp=2.46; SMR=2.03) (Ex. 23-22).

These are workers who are not routinely exposed to BD, but when they are exposed, their exposures are usually high (Ex. 2-27). In comparison, production workers with routine exposures at lower levels had a lower SMR for death from lymphohematopoietic cancers (Obs=19; Exp=13.05; SMR=1.46). This evidence lends further support to the need for a STEL for BD exposure.

The proposed standard allows a STEL of 10 ppm as long as the 8-hour TWA is no greater than 2 ppm. If the health effects of BD are related to total dose alone, without regard to temporal distribution of that dose, an 8-hour TWA limit on exposures will reduce the risk of those health effects by limiting the total dose received. However, if the effects from exposure can be shown to be greater when the total dose is received in a short period than when it is spread over a longer period, an 8-hour TWA limit alone might not be adequate to reduce the risks. In the event of such a "dose-rate" relationship being established, a STEL might be warranted as a supplement to the TWA in order to provide protection against additional risk attributable to concentration of the dose over short periods.

D. Exposure Monitoring: Paragraph (d)

The proposed standard imposes monitoring requirements pursuant to section 6(b)(7) of the OSHA Act (29 U.S.C. 655) which mandates that any standard promulgated under section 6(b) shall, where appropriate, "provide for monitoring or measuring of employee exposure at such locations and intervals, and in such manner as may be necessary for the protection of employees." The purposes of requiring air sampling for employee exposure to BD include the prevention of overexposure of employees; the determination of the extent of exposure at the worksite; the identification of the source of exposure to BD; and collection of exposure data by which the employer can select the proper control methods to be used and to evaluate the effectiveness of the selected methods. Monitoring enables employers to meet the legal obligation of the standard to assure that their employees are not

exposed to BD in excess of the prescribed levels, and to be able to notify employees of their exposure levels, as required by section 8(c)(3) of the Act. In addition, collection of exposure monitoring data enables the examining physician to be informed of employee exposure levels.

Exposure monitoring is also important to determine the exact level of BD to which employees are exposed. This determines what other requirements of the standard will have to be met. Major sections of the standard are triggered if an employee is exposed above the action level and are not required if the employee is not exposed.

The exposure monitoring provisions require the employer to determine the exposure for each employee exposed to BD. This does not mean that separate measurements for each employee must be taken but rather "representative employee exposure" is to be determined. Samples must be taken within the employee's breathing zone (also known as "personal breathing zone samples" or just "personal samples"). The samples used to determine whether the employee is exposed above the action level must represent the employee's exposure to airborne concentrations of BD over an eight-hour period without regard to the use of respirators. Representative 15-minute short-term employee exposures are to be determined on the basis of one or more samples representing 15-minute exposures associated with operations that are most likely to produce exposures above the short term exposure limit for each shift for each job classification in each work area. Here, too, respirators cannot be a factor. (See "Employee exposure", as defined in the definitions section). Full-shift sampling must be conducted for each job classification in each work area. These samples must consist of at least one sample representative of the entire shift or consecutive samples taken over the length of the shift.

Representative exposure sampling is permitted when there are a number of employees performing essentially the same job under the same conditions. For these types of situations, it may be sufficient to monitor a fraction of such employees in order to obtain data that are "representative" of the remaining employees. As permitted in paragraph (d), representative personal sampling for employees engaged in similar work and exposed to similar BD levels can be achieved by measuring that member of the exposed group reasonably expected to have the highest exposure. This result would then be attributed to the remaining employees of the group.

To eliminate unnecessary monitoring and improve the cost-effectiveness of the standard, paragraph (d)(1)(iv) allows employers who can document that exposure levels are the same for similar operations in different work shifts throughout the work day, to sample only the shift for which the highest exposures are expected to occur. This provision does not apply to initial monitoring requirements. The employer must be able to demonstrate that employees on the shifts who are not monitored, are not likely to have exposures higher than those of the shifts monitored.

Workplace exposure monitoring is initially required of all employers who have a place of employment covered under the scope of this standard. In addition, the proposed standard requires that the initial monitoring be conducted within 60 days of the effective date of the final standard or the introduction of BD to the work place. OSHA believes that initial monitoring can be completed within that time. To eliminate unneeded requirements, if an employer has workplace monitoring data from within one year prior to the effective date, those data will be allowed to satisfy the requirements of the initial monitoring.

This provision is designed to make clear that OSHA does not intend to require employers who have voluntarily performed employee monitoring to repeat such monitoring if they have reliable and objective data showing that their employees are not exposed to BD above the permissible exposure limits.

The results of the initial monitoring represent the data which will be used to determine when further periodic monitoring will be required. If exposures are below the action level, then no further monitoring would be required unless processes or products change which are likely to lead to higher exposure. If the initial monitoring results show employee exposures at or above the action level, but at or below the 8-hour TWA limit, then the employer must repeat monitoring for these individuals every six months. If exposures are above the 8-hour TWA limit, then the employer must remonitor every three months. If the employee's exposure is above the STEL, the employee shall repeat such monitoring at least every three months until the employee's exposure falls to or below the STEL. If, in subsequent monitoring, results indicate that an employee's exposure, as determined by two consecutive measurements taken at least seven days apart, falls from above the 8-hour TWA to between the 8-hour TWA and the action level, then monitoring need only be done every six months, unless

production changes may lead to higher exposures. Similarly, when the two consecutive measurements indicate the exposure has dropped below the action level, further monitoring can be discontinued. OSHA believes those frequencies, which are similar to other OSHA standards such as Ethylene Oxide are sufficient.

OSHA's proposed monitoring of employees whose exposures are between the action level and the 8-hour TWA every six months is based on several factors. While these employees have been shown to be exposed to levels of BD below the 8-hour TWA, their levels of exposures are not so far below the PELs that monitoring could safely be discontinued. Even minor changes in engineering controls or work practices could result in exposures increasing to levels above the PEL. Remonitoring on a semi-annual basis will enable the employer to be confident his or her controls are working or, in the event exposures are shown to exceed the 8-hour TWA, alert the employer as to the need for additional controls.

In short, the standard would contain a TWA, a STEL and an action level. The interrelationship among these three exposure levels would determine the frequency at which employers are obligated to monitor employee exposures. There would be six possible exposure scenarios, or combinations of TWA and short-term exposures, that would determine the frequency of required monitoring. Table 34 lists these six exposure scenarios, along with their monitoring frequencies.

TABLE 34.—EXPOSURE SCENARIOS AND MONITORING FREQUENCIES

Exposure scenario	Required monitoring activity
Below the action level and at or below the STEL.	No 8-hour TWA monitoring required.
Below the action level and above the STEL.	No 8-hour TWA monitoring required; monitor STEL exposures every three months.
At or above the action level, at or below the TWA, and at or below the STEL.	Monitor 8-hour TWA exposures every six months.
At or above the action level, at or below the TWA, and above the STEL.	Monitor 8-hour TWA exposure every six months and monitor STEL exposures every three months.
Above the TWA and at or below the STEL.	Monitoring 8-hour TWA exposures every three months.
Above the TWA and above the STEL.	Monitor 8-hour TWA exposures and STEL exposures every three months.

As shown by the table above, the action level trigger largely determines whether employers must monitor employees exposure to BD. The only exception would be the scenario in which 8-hour TWA exposures are below the action level and short-term exposures are above the STEL. In this particular case, the existence of an STEL would obligate employers to monitor short-term exposures four times per year at those job locations where the STEL is exceeded, but employers would not be obligated to monitor 8-hour TWA exposures at those job locations.

Employers are allowed to terminate monitoring of employees for whom initial monitoring results indicate their exposure to be below the action level. Furthermore, if periodic monitoring results indicate, by at least two consecutive measurements taken at least seven days apart, that employee exposures are below the action level, the employer may discontinue monitoring for these employees. OSHA recognizes that monitoring may be a time-consuming, expensive endeavor and therefore offers employers the incentive to be allowed to discontinue monitoring for employees whose sampling results indicate exposures below the action level. It is hoped that such a provision to allow the employer to stop monitoring employees whose exposure to BD falls below the action level will encourage employers to keep exposures to BD below the action level in their workplaces, thereby keeping exposures to a minimum and saving themselves the time and expense of monitoring and other applicable provisions of the proposal as well.

Employees will continue to be protected even when periodic monitoring has ceased because of the requirements of paragraph (d)(5). Additional monitoring is required by paragraph (d)(5)(i) when there has been a process or production change or a change in control equipment, personnel or work practices which may result in new or additional exposures to BD. There may also be times within the employer's own workplace when the employer may suspect a change which may result in new or additional BD exposure; the employer is obligated by this paragraph to monitor at these times also. Instead of trying to define each and every situation where the employer must monitor for new or additional exposures to BD, it is intended by this section that the employers will institute this additional monitoring when the employer has any reason to suspect a change.

Paragraph (d)(5)(ii) specifically requires additional monitoring to be conducted whenever spills, leaks, ruptures or other breakdowns occur. Such occurrence can result in very high exposures. After the clean-up of the spill or repair of the leak employers must perform redeterminations of airborne exposure levels for those employees who may be exposed at such areas of their worksites. Such redetermination provides one method of ascertaining that proper corrective methods have been instituted and employee exposures are not significantly altered from what they were prior to the leak or spill.

The employer is required to use monitoring and analytical methods which have an accuracy (at a confidence level of 95 percent) of not less than plus or minus 25 percent for airborne concentrations of BD and within plus or minus 35 percent for airborne concentrations of BD at or above the action level and to below the TWA limit of 2 ppm. Methods of measurement are presently available to detect BD to this accuracy level at levels of 0.155 ppm. One such method is described in Appendix D. Sampling and analysis may also be performed by portable direct reading instruments, real-time continuous monitoring systems, passive dosimeters or other suitable methods. The employers have the obligation to select a monitoring method which meets the accuracy and precision requirements of the standard under the unique conditions which exist at the employee's worksite.

The proposed standard further requires that employers notify each of their employees in writing, either individually or by posting in an appropriate location accessible to affected employees, the results of personal monitoring samples. The employer is obligated to do this within 15 working days after the receipt of the results. In addition, the written notification must contain the corrective action(s) being taken by the employer that will reduce the employee's workplace exposure to or below the 8 hour TWA and 15-minute STEL, where ever the 8-hour TWA or the 15-minute STEL is exceeded. This requirement, in keeping with other recent OSHA health standards, allows the employer to post written exposure monitoring results in an easily accessible location, or allows the employer to notify individuals in writing of their monitoring results, whichever better suits that employer's worksite. The requirement to inform employees of the corrective actions the employer is going to take to reduce the exposure level to below the PELs is

necessary to assure employees that the employer is making efforts to furnish them with a safe and healthful work environment, as required by section 8(c)(3) of the Act.

The employer is also required to allow employees or their designated representatives an opportunity to observe the employee exposure monitoring. This provision is also required by statute (Section 8(c)(3) of the OSH Act) and is provided for in paragraph (m) of the proposal, as is discussed in more detail below.

OSHA solicits comment on the proposed frequency of monitoring and any other aspects of exposure monitoring.

E. Regulated Areas: Paragraph (e)

The proposal would require employers to establish a regulated area where airborne exposures to BD exceed the PELs. Access to the regulated area would be restricted to authorized persons and the areas themselves are to be demarcated in any manner that limits the number of persons exposed to BD within these areas. This provision applies when the PELs are likely to be exceeded, but it does not apply to inadvertent releases covered under paragraph (h) on emergency situations.

The purpose of a regulated area is to ensure that employers make employees aware of the presence of BD at levels above the PELs in the workplace and to limit BD exposure to as few employees as possible. The establishment of a regulated area is an effective means of limiting the risk of exposure to substances known to be or suspected of having potential carcinogenic activity in humans. Because of the serious nature of the possible exposure and the need of persons entering the area to be protected by properly fitted respirators, the number of persons given access to the area is to be limited to only those employees needed to do the job.

The final standard gives employers a choice of whether to use, for example, ropes, markings, temporary barricades, gates, or more permanent enclosures to demarcate and limit access to these areas. Factors that employers might consider in determining the type of identification system include the configuration of the area, whether the regulated area is permanent, the airborne BD concentration, the number of employees in adjacent areas, and the period of time the area is expected to have exposure levels above the PEL. Permitting employers to choose how best to identify and limit access to regulated areas is consistent with OSHA's belief that employers are in the

best position to make such a determination based on the specific conditions of their workplaces.

Paragraph (e)(4) also requires that, whenever an employer at a multi-employer worksite establishes a regulated area, that employer must communicate effectively the location and access restrictions to other employers at the worksite. Such communication would lessen the possibility that unauthorized persons would enter the area or that workers not involved in BD-related operations would be exposed inadvertently. OSHA would require employers whose employees are exposed to BD at concentrations above the PELs to be responsible for coordination of their work with other employers whose employees could suffer excessive exposure because of their proximity to the source of exposure to BD.

The regulated area provision reflects OSHA's concern that the employees at nearby sites be aware of the existence of the hazard and respect the need to remain outside of the perimeters delineated as a regulated area. While this could be accomplished by the employees of the second employer simply reading the signs posted by the first employer, this would not assign accountability. If the second employer is aware of the hazards, then it is the responsibility of the second employer to assure that his employees do not enter the regulated area of the first employer without permission and proper protective equipment.

F. Methods of Compliance: Paragraph (f)

The proposed standard would require the employer to reduce employee exposures to within the permissible limit by use of feasible engineering controls and work practices. Employers would be required to institute engineering controls and work practices to reduce exposures to the lowest feasible level even if these measures, alone, would not reduce the concentration of airborne BD below the PELs. The employer would be required to supplement these controls with respirators to ensure that employees are not exposed to BD at levels above the PELs.

OSHA would require that employers use engineering controls to comply with the proposed standard, because these controls would reduce exposure hazards in the working environment by removing, at least in part, the contaminant from the air. OSHA has found that employers also generally need to modify their work practices in order to operate engineering controls effectively. OSHA considers the use of respirators to be the least satisfactory

approach to exposure control because they provide adequate protection only if employers ensure that respirators are properly fitted and worn. Unlike engineering controls and work practices, respirators are intended to protect only the employees who are wearing them from a hazard, rather than reducing the hazard. Accordingly, OSHA would permit reliance on respirators only insofar as employers can demonstrate that the engineering controls and work practices needed to comply with the PEL are infeasible.

There are certain activities where exposures are intermittent in nature and limited in duration, most often those involving maintenance and repair operations as well as those in emergency situations, where the use of engineering and work practice controls is not feasible. Where engineering controls are not feasible, the employer, nevertheless, has the obligation to protect employees. This obligation may require the use of respirators as a primary means of control.

OSHA policy on respirator use has been spelled out in the Respiratory Protection Standard, 29 CFR 1910.134(a)(1), which applies to all exposures to airborne toxins, and in the Air Contaminant Standard 29 CFR 1910.1000(e), which applies to exposures to all substances listed in Tables Z-1-A, Z-2, and Z-3. This policy was inherent in the national consensus standards which were adopted by OSHA in 1971, pursuant to section 8(a) of the OSH Act of 1970.

Subsequent additions to subpart Z, which were developed through section 6(b) rulemaking proceedings also reflect OSHA's determination that employers must control hazards by engineering controls and work practices instead of respirators to the extent feasible.

Based on the belief of OSHA and general industrial hygiene community that engineering controls should be the primary means of compliance, OSHA has concerns regarding JACA's recommendation that the emissions from pumps, and consequently workers' exposure to BD can be controlled more "cost-effectively" with the use of leak detection program rather than with double mechanical seals (Ex. 30). OSHA's concern with JACA's recommendation relies on the fact that a leak detection program is not a real-time measurement. Leak detection program is defined by JACA as a periodic inspection of pumps and compressors (potential sources of leaks) with an organic vapor analyzer (Ex. 30). For leak occurrence between inspection times, employees may not become aware of their exposure to BD and consequently a

false security situation may be created. Furthermore, the availability of an organic vapor analyzer to meet the detectability and specificity for BD at the PELs has not yet been established. Since double mechanical seals are currently available and employed as a conventional control technology by BD industry, OSHA is soliciting information and comments regarding the feasibility of this method of control in lieu of JACA's recommendation of leak detection program. OSHA's request for comments is based on the fact that among fourteen BD monomer producers (with over 90 percent of domestic BD production) responding to CMA's survey, six currently use double mechanical seals on pumps (Ex. 3-21). In this regard, Heiden Associates, Inc., an independent economic consulting firm located in Washington, D.C., recommends replacing or retrofitting existing pumps with double mechanical seals (Ex. 28-14). Heiden Associates, Inc. was commissioned by CMA to conduct a regulatory compliance study of the economic and technical implications of alternative specifications of the proposed regulation. This is an indication that the industry is willing to employ double mechanical seal pumps in the remaining eight BD monomer producers as means of controlling emissions from pumps and their subsequent worker exposures. OSHA believes that continuous monitoring with an alarm system to alert workers of leak occurrence may be proven to be a feasible and effective alternative control technology. This control technology would definitely lessen the extent and the magnitude of workers exposure, if maintenance or repair work is performed promptly.

Paragraph (f)(2) requires employers who experience exposure in their work places over the PELs to establish and implement a written compliance program which describes the methodology to be used to reduce employee exposure to or below the PELs within their workplaces. No written compliance program is required if the exposure levels are already below the PELs. The written plan must provide feasible engineering and work practice controls and include a schedule for implementation, and must be furnished upon request for examination and copying to OSHA, NIOSH, and affected employees or their representatives. Once a workplace is in compliance with the standard, the written compliance plan need not be updated. If exposures later increase over the PELs; however, an update must be prepared. The written compliance plans is to be revised as

appropriate. Circumstances requiring revision of the compliance plan may include a change in controls or substantially different exposure conditions.

G. Respiratory Protection; Protective Clothing and Equipment: Paragraph (g)

When engineering controls and work practices cannot reduce employee exposure to BD to below the PELs, the employer must protect employees' health by the use of respirators. Specifically, respirators must be used while feasible engineering and work practice controls are being installed, in work operations such as maintenance and repair where engineering and work practice controls are infeasible and exposures are intermittent and limited in duration, where implementation of feasible engineering and work practice controls are exhausted but are not yet sufficient to reduce exposures below the PELs, and in emergencies. These limitations on the required use of respirators are consistent with the requirements of other OSHA health standards (e.g. asbestos, 1910.1001; ethylene oxide 1910.1047; benzene, 1910.1028), and with good industrial hygiene practice. They reflect OSHA's determination, as detailed in the preceding section on methods of compliance, that respirators are inherently less reliable than engineering and work practice controls. OSHA has proposed, therefore, to allow reliance on respirators to control exposures above the PEL only in designated situations.

OSHA published an advance notice of proposed rulemaking on February 22, 1983, (48 FR 7473) to solicit public comments on the use of engineering controls and respirators to control employee exposure to air contaminants. As a rule, OSHA prefers the use of engineering controls where feasible to respiratory protection. However, many employers felt the need for increased flexibility in the use of respiratory protection. Based on data received in response to the ANPR, OSHA published a Federal Register notice on June 5, 1989, (54 FR 23991) proposing to incorporate additional flexibility in its methods of compliance requirements by more explicitly setting forth circumstances under which respiratory protection may be used due to the general infeasibility of implementing engineering controls. They are: (1) During the time necessary to install feasible engineering controls; (2) Where feasible engineering controls result in only a negligible reduction in exposures; (3) During emergency, life saving, recovery operations, repair, shutdowns and field situations where there is a lack of utilities for

implementing engineering controls; (4) Operations requiring added protection where there is a failure of normal controls; and (5) Entries into unknown atmospheres.

In addition, OSHA requested public comment on other ways of allowing the employer to place greater reliance on the use of respirators to protect workers. Specifically, the Agency asked whether it is necessary to require all feasible engineering controls be installed for maintenance activities; whether respirator use should be permitted for any work situation in which the hazardous exposure is of very brief duration or at any time to achieve compliance with the STEL; and whether respirator use could be allowed in instances where the protection afforded by respirators was equal to, but less costly than, that provided by engineering controls. The proposal also requested information on whether equivalent protection for employees could be achieved by allowing respirator use in lieu of engineering controls for some substances while at the same time requiring employers who choose this option to do something extra, such as submit a written plan to the Agency that demonstrates how respirators provide protection equal to that provided by feasible engineering controls in the given work situation. Finally, OSHA asked for comment on the appropriateness of allowing employers to comply with exposure limits at all times by any method the employer deems advisable, an allowance which would, in effect, abolish OSHA's traditional hierarchy of controls.

This BD proposal requires employers to provide respirators to employees and to ensure that employees use the respirators properly. As in other OSHA standards, the employers are to provide the respirators at no cost to the employees. OSHA views this allocation of costs as necessary to effectuate the purposes of the Act. This requirement would make explicit an agency position which has long been implicit in the promulgation of health standards under section 6(b) of the Act.

The proposal also contains a table (Table 35) listing the types of respiratory protection to be provided based on airborne concentrations of BD in the workplace. The respirator selection table is consistent with OSHA's experience of the performance capabilities of the various types of respirators available.

Where employees are exposed to levels of BD greater than 50 ppm and respirator usage is permitted, positive

pressure atmosphere supplying respirators must be used (See Table 35). These respirators supply uncontaminated air to the user rather than mechanically cleaning the BD contaminated atmosphere. Employers may always use a respirator with a higher level of protection in lower concentrations of BD. For example, a supplied air respirator may be used when exposures are 20 ppm.

Employers shall select respirators from those certified as being acceptable for protection against BD by the Mine Safety and Health Administration (MSHA) and by the National Institute for Occupational Safety and Health (NIOSH), under the provisions of 30 CFR part 11. NIOSH has proposed the revision of the 30 CFR part 11 respirator certification requirements (52 FR 32401) and their repromulgation as 42 CFR part 84. OSHA is reviewing the NIOSH proposed respirator certification changes, and will be following the progress of the NIOSH's rulemaking on certification program. However, whether under the current 30 CFR part 11 standards, or under the new 42 CFR part 84 standards when they are finalized, OSHA will be requiring the use of NIOSH certified respirators.

Whenever respirator use is permitted under the proposal to control exposures to BD, the employer must implement a comprehensive respiratory protection program. The protection program must include the elements set forth in the general respiratory protection standard, 29 CFR 1910.134 which contains basic requirements for proper selection, fit, use, training of employees, cleaning, and maintenance of respirators. For employers to ensure that employees use respirators properly, OSHA has found that the employees need to understand the respirator's limits and the hazard it is protecting against in order to appreciate why specific requirements must be followed when respirators are used.

OSHA is currently revising its general respiratory protection standard, and will be updating and expanding the current 29 CFR 1910.134 provisions to account for advances in respiratory protection, fit testing and selection, and other changes in respiratory protection practices since the current standard was adopted in 1971. Since the respiratory protection revision rulemaking and the BD standard revision are taking place concurrently, OSHA has utilized the respiratory experience gained during the revision of 29 CFR 1910.134 in preparing the respirator provisions of this BD proposal. OSHA requests comments on all of the respirator provisions in the

proposal and their effects on the use of respirators to control exposures to BD.

When air purifying respirators are used, the employer is required to replace the air purifying element at 90% of the expiration of service life or at the beginning of each shift in which they will be used. This is because the breakthrough times for cartridges with BD are short. NIOSH performed a respirator cartridge breakthrough study with BD (EX. 23-83) which showed breakthrough times from 55 to 92 minutes for cartridges exposed to BD concentrations of 75 ppm and 93 ppm. These short service life durations for cartridges are troubling. Since the useful service lives with cartridges for BD are too short to provide an adequate margin for safety, OSHA is proposing that only canisters, front or back mounted (industrial size), be allowed for use with BD when air purifying respirators are used. These large capacity filters (canisters) are needed to provide an adequate filtering capacity. In order to assure adequate canister capacity, OSHA requires that each organic vapor canister provide a minimum service life of four hours when it is tested under the maximum BD concentration expected in the workplace. Currently the proposed challenge testing protocol would require that canisters be tested at 25 °C, 85% relative humidity, 64 liters per minute air flow and at a concentration of 150 ppm of BD. The air flow will be 115 and 170 liters per minute, respectively, for tight and loose fitting powered air-purifying respirators. OSHA solicits comment on whether the current challenge protocol should be incorporated into the regulation.

The standard permits employees to leave the regulated area to readjust the respirator facepiece to their faces for proper fit. The respirator wearer who detects the odor of BD or who feels eye irritation should leave the area immediately and replace the air purifying elements before reentry. It also permits them to leave the regulated area to wash their faces to avoid potential skin irritation associated with respirator use.

Employers will be required to perform fit testing in accordance with 29 CFR 1910.134. In the proposed revision of 29 CFR 1910.134, initial and annual fit testing will be required for respirator wearers. Qualitative fit testing has been validated for protection factors of 10 times the 8-hour TWA, which for BD means a level of 20 ppm, with quantitative fit testing required for higher concentrations. Under the provisions of the respirator proposal, employers in BD workplaces would be

allowed to use qualitative fit testing for respirators up to an exposure level of 20 ppm of BD. In order to use respirators in areas that require higher protection factors, quantitative fit testing would have to be used.

When tight fitting respirators are used, OSHA would require respirator fit testing because proper fit is critical to the performance of both tight fitting negative pressure, air-purifying respirators and tight fitting positive pressure respirators. With tight fitting air purifying respirators, a negative pressure is created within the facepiece of a properly fitted respirator when the wearer inhales. A poorly fitted respirator allows contaminated workplace air to enter the facepiece through gaps and leaks in the seal between the face and the facepiece instead of passing through the sorbent material. With tight fitting positive pressure respirators, a poor facepiece fit can result in overbreathing of the respirator with contaminated air leaking into the facepiece. The higher protection levels available with tight fitting positive pressure respirators would be compromised if fit testing were not performed to eliminate poorly fitting respirators.

Where quantitative fit testing is used, the proposal in Appendix E requires that a fit factor of 500 for full facepieces be achieved during the fit test. These fit factor levels are easily obtainable with tight fitting respirators that properly fit the employee. Respirator fit testing is conducted in a laboratory setting, and experience with fit testing has shown that the quantitative fit factors measured in the test booth do not directly translate to those that would be achieved consistently in the workplace. Therefore, the proposal requires that higher fit factors be obtained during quantitative fit testing to better assure that the required levels of protection will be achieved under actual use conditions. Obtaining a proper fit for each employee may require the employer to provide two to three different sizes and types of masks so that an employee can select the most comfortable respirator having a facepiece with the least leakage around the face seal.

Once the proper respirator has been selected, a simple facepiece seal fit check performed at the start of each shift by each employee wearing a tight fitting respirator can meet the objective of demonstrating that a proper facepiece seal is being obtained. This test can be either a positive pressure fit check, in which the exhalation valve is closed and the wearer exhales into the facepiece to

produce a positive pressure, or a negative pressure fit check, in which the inlet is closed and the wearer inhales so that the facepiece collapses slightly. Employees must receive training to perform this test properly. In appendix E, Section A (12), OSHA has proposed that the employer maintains records of employee fit testing. OSHA seeks comment on whether having the employee certify the results of a fit test as compared with the record keeping requirements would provide adequate protection to employees who must wear respirators.

As to the protective equipment, the proposal is sufficiently performance-oriented to allow the employer enough flexibility to provide only the protective clothing and equipment necessary to protect employees in each particular work operation from the BD exposure encountered. Therefore, compliance can be tailored to fit the hazards posed on a day-to-day basis.

H. Emergency Situations: Paragraph (h)

Paragraph (h) of OSHA's proposed rule for BD requires that employers develop written plans for emergency situations and that they develop methods of alerting employees of these situations and evacuating workers when necessary. The plan must contain a requirement that employees engaged in correcting an emergency situation be provided with appropriate respiratory protection. Employers would also have to be prepared to alert employees to evacuate the workplace in the event of an emergency. The performance language of the emergency situation paragraph of the standard will give employers the flexibility to choose any effective method of alerting employees, including communications systems, voice communication, or a bell or other alarm.

OSHA is proposing specific provisions for emergency situations because of the potential adverse health effects associated with high BD exposures. The emergency situations that OSHA is concerned about preventing with this provision are those having the potential to produce acute toxic effects among inadvertently exposed employees. The potential acute toxic effects of concern are short-term and reversible effects such as but not limited to frostbite of the skin.

To clarify that the intent of this provision is to protect employees from unexpected and substantial releases of BD, OSHA has defined "Emergency Situations" as "an occurrence such as but not limited to equipment failure, rupture of containers, or failure of

control equipment that may result in an unexpected significant release of BD." The types of emergency situations are those which require securing internal or external emergency services such as rescue, fire, or emergency medical services. OSHA recognizes that not all sudden releases constitute emergencies. For example, the accidental breaking of a sampling syringe containing a minute amount of BD would not normally be regarded as an emergency. On the other hand, failure of a valve on a reaction vessel under pressure, a flange, or a safety relief valve would definitely constitute an emergency.

OSHA believes that these minimal requirements will provide the necessary means to ensure that affected employees are substantially protected against hazardous exposures.

I. Medical surveillance: Paragraph (i)

The purpose of the medical surveillance program for BD is four-fold:

- (1) To determine if an individual can be exposed to the concentration of BD present in his or her workplace without experiencing adverse health effects;
- (2) To detect, to the extent possible, early or mild clinical conditions due to BD exposure so that appropriate preventative measures can be taken;
- (3) To diagnose any occupational diseases that occur as the result of BD exposure; and
- (4) To determine the employee's fitness to use respiratory protective equipment.

The proposed requirement for a preplacement examination is intended to achieve, in part, the first objective. This objective is further enhanced by proposing to require that an evaluation of cardiopulmonary system which would include a pulmonary function test be offered to respirator wearers. Moreover, an evaluation of reproductive function can be included if requested by the employee and deemed appropriate by the physician.

The proposed standard requires that each employer institute a medical surveillance program for all employees who are exposed to BD at concentrations at or above the action level for at least 30 days a year, all employees who are or may be exposed to BD at or above the 8-hour TWA or STEL for at least 10 days a year, and all employees exposed to BD in an emergency. Any employee who must wear a respirator is to be offered a medical evaluation of the cardiopulmonary system regardless of the duration of that employee's exposure.

OSHA proposes to require employers to provide medical surveillance to

employees who are exposed over the action level for 30 days or more in a year. Employees exposed over the PELs would become eligible for medical surveillance after only 10 days of such exposure. Further, employees required to use respirators are to be offered medical evaluation of their cardiopulmonary system. Including such employees within medical surveillance will provide the greatest benefits. There are at least two advantages to this tiered approach to medical surveillance. First, inclusion of a cut-off based on duration of exposure recognizes that the diseases associated with BD exposure are basically chronic, so that employees exposed for only a few days in a year are likely to be at much lower risk of developing BD-related disease. Employers would be able to focus valuable medical surveillance resources on high-risk employees. OSHA believes that the limits placed on medical surveillance by these cutoffs, based both on exposure level and on the number of days an employee is exposed to BD, are reasonable and represent an administratively convenient way to provide medical surveillance benefits to BD-exposed workers. Second, employees exposed above the PELs must wear respirators. Should the respirator fail or not be worn as prescribed, the employee would be placed at exceptionally high risk. Enhanced surveillance based on level of potential exposure is also a reasonable allocation of scarce medical resources.

OSHA is requiring the employer to provide all employees who will be required to wear a respirator with medical evaluation of their cardiopulmonary function. The examination is to be performed prior to the employee's actual wearing of a respirator and annually thereafter. The purpose of this provision is twofold. First, it allows those individuals who will be exposed above the PELs regardless of the duration of exposure to be at least partially included in the medical surveillance program. Second, respirator usage presents an excess burden to the pulmonary system of the employee. This burden may result in symptoms such as shortness of breath, chest pain, dizziness or fatigue. All of these symptoms will be greatly exacerbated by pre-existing lung disease such as chronic bronchitis, emphysema, asthma or pneumoconiosis. It is, therefore, imperative that all employees who will be wearing respirators be medically monitored to determine fitness for respirator usage. OSHA believes that the physician can best accomplish this through

administering an examination of the cardiopulmonary function.

The medical examinations for emergency situations are not triggered by airborne concentrations routinely found in a workplace. Where very large amounts of materials are kept in a sealed system, routine exposure may be essentially zero. However, rupture of the container might result in catastrophe. Thus, employers who have identified that they have operations where there is a potential for an emergency involving BD must take necessary actions to assure that, in the event an emergency occurs, facilities will be available and medical assistance by professionals knowledgeable about the toxic effects of BD will be rendered to exposure victims promptly.

The OSH Act requires that, where appropriate, occupational health standards shall prescribe the type and frequency of medical exams or other tests to be made available by the employer or at his or her cost to exposed employees in order to determine if the employee's health is adversely affected by his or her exposure. All medical procedures would have to be performed by or under the supervision of a licensed physician, and the medical surveillance would have to be offered at a reasonable time and place and without cost to employees.

Medical examinations would be provided to employees before their initial assignment to work in an area where they would be exposed to BD, annually thereafter, and upon termination of employment or reassignment to an area where they are no longer being exposed to BD at airborne levels at or exceeding the action level. OSHA's requirement for a preplacement examination is intended to achieve the objective of determining if an individual will be able to work with the given BD exposure without adverse effects. It also serves the useful function of establishing a general health baseline for future reference.

Annual medical surveillance would emphasize the occupational and medical history of the worker and the physical examination conducted by the physician. A complete blood count would also be required. Employees with special needs, i.e. those who have special reproductive concerns or hematopoietic or reticuloendothelial changes of an unknown nature, would have to be offered medical examinations adequate to permit the responsible physician to determine whether or not their health is being impaired by BD exposure.

Employers would be required to provide the responsible physician with the information needed to assure that the physician will be adequately informed to reach a medical determination including the employee's duties, exposures and protective equipment worn, if any. The physician would be required to provide a written determination to the employer. The employee would be informed of all results of his or her medical examination including diseases of a nonoccupational origin.

The health hazards known or suspected to be associated with occupational exposure to BD consist of non-Hodgkins lymphoma, leukemia, adverse reproductive and developmental outcomes in males and females and their offspring, and anemia. Most of this information is derived from toxicology studies in rats and mice. Epidemiologic studies revealed suggestive evidence consistent with the results found in animals.

Evidence in animals suggests that BD is capable of adversely affecting the reproductive organs in males and females as well as causing developmental problems in the offspring of exposed dams. BD as a reproductive toxin has not been examined in humans. BD's capability to cause cancer in animals at multiple sites, however, coupled with its potential to be metabolized to toxic intermediates that are capable of binding to DNA, suggests that this chemical may interact with germ cells as well as somatic cells. Thus, BD should be regarded as a possible reproductive and developmental toxic agent in humans; the no-observed-effect-level (NOEL) for humans is essentially unknown although animal evidence suggests that it is below the current permissible exposure limit.

Alterations in the peripheral blood cells are not especially characteristic of lymphomas (Exs. 23-52, 23-57). The correlation between peripheral blood counts and marrow involvement by lymphoma is poor. Some abnormality in blood counts is found in only 37 percent of patients with bone marrow infiltration. Examination of the peripheral smear in patients with non-Hodgkins lymphoma may yield evidence of malignant cells in about 15 percent of patients (Ex. 23-52, p. 1,357). Changes in hemoglobin level (Hgb), thrombocyte (platelet) count, and leukocyte count do occur in the presence of leukemia. Furthermore, anemia has been observed in mice exposed to BD for too short a time interval for the expression of neoplasia, and blood cell changes, not

necessarily indicative of bone marrow involvement, have also been observed in workers exposed to BD. Thus, in deciding to include a complete blood count (CBC) in the proposed medical examinations, OSHA gave weight to the possibility that BD may be associated with leukemia and anemia as well as non-Hodgkins lymphoma.

The main goal of periodic medical surveillance for workers should be to detect adverse effects at an early, and potentially still reversible stage. In general, this goal is difficult to achieve for cancer which is not a readily reversible disease, although the prognosis is better for patients in the earlier stages of the disease. Some types of leukemia and lymphoma, unlike carcinomas, remain curable even at an advanced stage (Ex. 23-49). Consequently, periodic medical surveillance for BD can achieve the goal of detecting early bone marrow toxicity.

While the medical surveillance program proposed cannot detect BD induced cancer at a preneoplastic stage, OSHA anticipates that, as in the past, methods for early detection and treatments leading to enhanced survival rates will continue to evolve. Additionally, current knowledge of the diseases that may be caused by BD is far from complete; for some effects, such as anemia and reproductive toxicity, it is not possible to determine with quantitative certainty the level of protection afforded the worker by the proposed standard. It is also not presently possible to identify all diseases that may be associated with exposure to BD nor to demonstrate that changes in the blood are markers that identify persons at high risk of subsequently developing cancer from their exposure to BD. Thus, an important goal of the medical surveillance program is to provide information on the adequacy of the proposed PELs for BD.

Consistent with other recently promulgated standards including Benzene (29 CFR 1910.1028) and Formaldehyde (29 CFR 1910.1048), OSHA is proposing that all medical procedures be performed by or under the supervision of a licensed physician. Clearly, a licensed physician is the appropriate person to supervise and evaluate a medical examination. However, certain parts of the required examination do not necessarily require the physician's expertise and these may be conducted by other suitably qualified health care personnel under the supervision of the licensed physician.

The proposed requirement that examinations are to be offered without cost to the employee and be given at a

reasonable time and place and without loss of pay is necessary to ensure that employees will participate in the medical surveillance program. This provision is also consistent with other OSHA health standards and with provisions contained in the OSH Act.

OSHA is proposing to require that persons, other than licensed physicians, who administer the pulmonary function tests required by the BD proposal, must complete a training course in spirometry sponsored by an appropriate governmental, academic, or professional institution. This provision is consistent with several other OSHA standards, including Cotton Dust (50 FR 51220) and Benzene (29 CFR 1910.1028), and it will assure that the numerous BD employees who must wear respiratory protection will receive adequate assessment of their lung capacity, a vital test in determining if they are capable of wearing respirators.

The proposed medical surveillance program specifies when employees must be offered medical examinations and consultations. Routine screening, which includes occupational and medical histories, physical examinations, and examinations of the peripheral blood cells, must be offered annually for all employees eligible to participate. The interval proposed is consistent with other OSHA health standards; based on OSHA's experience with these other standards, the Agency believes that annual surveillance would strike a proper balance between the need to diagnose leukemias or lymphomas at an early stage to enhance the possibility of remission through medical intervention and the limited number of cases likely to be identified through the surveillance program. There is no fixed interval for examinations provided following exposure in an emergency. These events do not occur at any established interval; they are a matter of individual concern.

The purpose of the periodic examination is to detect individuals with blood changes characteristic of anemia, or leukemia, and to detect, by physical examination, any individuals with non-Hodgkins lymphoma. To achieve these goals, the health status of each employee must be reviewed periodically when there is a likelihood that workplace exposures or activities could produce these adverse effects. Because leukemias and lymphomas can occur after a relatively short latency period, OSHA has proposed to make annual surveillance available to all employees regardless of their age or length of employment in a BD exposure area.

To assure that no employee terminates employment while carrying an active, but undiagnosed, disease, OSHA is proposing to require that the employer offer a medical examination to employees when they terminate their employment in the BD area or transfer to an area where they would no longer remain eligible for future surveillance. OSHA has some concern that this may not be wholly adequate for identifying cancer in high risk employees and requests public comment on whether continued annual surveillance should be offered to employees who have transferred to other areas within the corporation.

Predisposition to lymphomas is associated with immune deficiency syndromes. In addition, leukemia has been associated with benzene exposure; ionizing radiation; and certain drugs, which can cause aplastic anemia. An adequate patient history would collect information on the patient's potential or past exposure to such substances to aid in identification of employees at highest risk and to determine if other factors, as well as BD, might be involved.

Non-Hodgkins lymphoma and leukemia often cause characteristic complaints in patients. Not infrequently the signs and symptoms are sub-clinical. Therefore it is extremely important that a thorough medical and occupational history be taken for these workers followed by a thorough physical examination as the second step.

Animal evidence suggests that BD affects the bone marrow, resulting in anemia. In mice, inhalation of BD at 1,250 ppm resulted in a decrease in circulating erythrocytes, total Hgb and hematocrit (Hct), an increase in mean corpuscular volume, and leukopenia, due mainly to a decrease in segmented neutrophils (Ex. 23-12). These findings would be inconsistent with a diagnosis of macrocytic megaloblastic anemia suggesting that a complete blood count (CBC) with a leukocyte count might yield information on over exposure to BD at such a time that the toxic effects would be reversible. Consequently, OSHA has proposed to require a CBC for preplacement and periodic medical examinations for all workers exposed to BD at concentrations exceeding the action level for the time periods specified. A CBC would consist of a white blood cell count (WBC), Hct, Hgb, differential count, red blood cell count (RBC) and WBC and RBC morphology (Ex. 23-55).

The specific diagnosis of lymphoma or leukemia is not simple. If physical examination reveals characteristic signs, additional confidence in the possible diagnosis can be made by

obtaining relevant laboratory tests. However, for a definitive diagnosis, additional examinations would need to be performed by an experienced hematologist; the assistance of other specialists may be necessary also (Exs. 23-52, 23-57). Furthermore, prompt diagnosis is considered essential to the medical management of the patient. Consequently, OSHA is requiring the employer to cover the cost of specialists called in by the attending physician when there are abnormalities of the hematopoietic or reticuloendothelial systems for which no cause can be found. OSHA considers this proposed requirement essential to ensure that employees receive prompt diagnosis at the earliest stage possible so that the treatments needed to effect remission of cancer will be more likely to succeed.

The extent and the type of service to be made available to employees who are concerned about their reproductive health will be determined by the examining physician so that affected employees can benefit from new technologic developments and the responsible physician can provide services appropriate to the risk to the concerned individual. In extreme circumstances, the physician might recommend evaluation of fertility should the employee be exposed to substantial amounts of BD from a leak or spill and should the employee request such tests.

In contrast to the chronic toxicity of BD, the acute effects of BD would be described as practically nontoxic based on LD₅₀ studies even though sensory irritation and narcosis are possible at very high doses (see ratings in appendix A of the Hazard Communication Standard, 29 CFR 1910.1200). In fact, the upper level of testing in animals has been capped by the necessity of keeping the exposures below the lower explosion limit. Thus, medical monitoring proposed for employees exposed to BD at high concentrations in emergencies focuses on the possibility that there is a dose rate effect which makes the potential for long-term consequences more severe than if the same integrated dose were received over a period of years. In addition, there is a possibility that a more acute form of neoplasia, with a short latency period, might occur. Of course, any acute effects seen in an employee exposed to BD in an emergency should be treated.

To ensure that the responsible physician has the information needed to perform an assessment of the patient's ability to work with BD, OSHA is proposing that the employer provide the responsible physician with a copy of the standard and all relevant appendices. For the same reasons, the employer

would also have to supply the responsible physician with information from previous medical examinations that were administered to the employee and that are under the employer's control.

OSHA proposes to require employers to supply the results of exposure monitoring and information on any personal protective equipment and respiratory protection used or to be used by the employee to the physician responsible for medical surveillance. For emergencies, the employer would be required to supply the physician with a description of the details surrounding the emergency. This information would assist the physician in determining if an employee is likely to be at risk of harmful effects from BD exposure. A well-documented exposure history also assists the physician can in determining if a disease that is observed may be related to BD exposure, and it helps the physician to determine if any restrictions should be placed on the employee's occupational exposure to BD based on medical findings.

The proposal would require employers to obtain from the examining physician a written opinion containing the results of the medical examination, the physician's opinion as to whether the employee would be placed at increased risk of material health impairment as a result of exposure to BD, and any recommended limitations on the employee's exposure or use of personal protective equipment. In rendering his opinion regarding the employee's suitability for work with BD, the physician must rely on the obtained results of clinical and other tests performed to support his or her conclusions.

The physician must exclude findings or diagnoses which are unrelated to occupational exposure in the written opinion to reassure employees participating in medical surveillance that they will not be penalized or embarrassed by the employer's obtaining information about them not directly pertinent to BD exposure. Such findings, however, should be communicated to the employee directly.

Employers are required to retain the records of the results of the medical examination and any tests performed, and they would have to provide a copy of the physician's written opinion to the employee within 15 days of receiving the opinion to ensure that the employee has been informed of the results of the medical examination in a timely manner. This medical surveillance program would protect employees and it would be a cost-effective approach to

identifying employees whose health may be adversely affected by exposure to BD.

The medical surveillance program proposed for BD is not expected to yield a large number of diagnosed cancers compared with the number of employees screened. Combined, lymphomas and leukemias account for only 9 percent of all cancers (Ex. 23-49), and the number of cases that should be found in an actively employed group of workers would be low. Nevertheless, the development of cancer is an extremely serious material impairment of health. For non-Hodgkins lymphoma, approximately half of the diagnosed cases are fatal within five years; for those who survive, extensive medical intervention is mandatory.

Consequently, OSHA has determined that the gravity of the diseases potentially caused by exposure to BD are sufficient to warrant a medical surveillance program that will be highly sensitive to the need to detect those employees who are at highest risk.

Evidence that BD is a carcinogen in animals is based on studies in which two species developed multiple site carcinogenicity following BD exposure. Malignancies at numerous sites were seen in rats and mice however, suggesting that humans may also be at risk of developing types of tumors other than lymphoma or leukemia from their exposure to BD.

It is possible, as suggested by the animal evidence, that the bone marrow is not the only site of carcinogenic action of BD or its metabolites in humans. If this is the case, other organs may also be targets for carcinogenic expression. Information available is not adequate to identify these sites at this time, and OSHA has not focused on any strategies for prevention of cancer at sites other than the lymphatic or hematopoietic systems in the proposed medical surveillance. Should such information become available during the course of these proceedings or at a later date, the responsible physician may expand the medical surveillance provided to workers to include appropriate testing.

OSHA is considering the possibility of expanding the proposed medical surveillance to include workers who were formerly exposed to BD in previous jobs while working for the same employer. Because cancer rates increase rapidly with age and because long-term workers were exposed to BD while open systems or batch processes were in use, inclusion of such persons should greatly enhance the number of cases of cancer of the hematopoietic and reticuloendothelial systems identified by

the medical surveillance program. Such an approach would be consistent with the requirement in the Benzene standard (29 CFR 1910.1028) which makes medical surveillance available to employees who have been exposed to greater than 10 ppm of benzene (the former standard) for 30 or more days in a year prior to the effective date of the standard when such exposures occurred while the employee worked for his or her current employer. OSHA is seeking comments from the public on whether an expanded medical surveillance program should be included in the final rule and any limitations that should be imposed on participation in such a program.

OSHA is also considering the appropriateness of providing Medical Removal Protection (MRP) with pay rate retention, as outlined in the Lead Standard, for any employee whose medical examination indicates that further testing by specialists is needed to confirm whether or not abnormal adverse health effects related to BD exposure are present. It would be anticipated that the MRP would be extended for short periods only given the urgency of the follow-up tests for a person whose health may be impaired. Therefore OSHA also seeks comments on the need for such a provision and the elements that should be included if MRP is adopted in the final rule for BD.

J. Communication of BD Hazards to Employees: Paragraph (j)

In this proposed BD standard, OSHA includes a paragraph entitled: "Communication of BD hazards to employees." This paragraph addresses the issue of transmitting information to employees about the hazards of BD through the use of: (1) Signs and labels, (2) material safety data sheets, and (3) information and training. Previous OSHA health standards generally included separate paragraphs on employee information and training and signs and labels. This standard incorporates both of those areas into this single paragraph, consistent with the intent of the generic standard, Hazards Communication (29 CFR 1910.1200) which addresses all three items as essential to the purpose of informing workers of the hazards of the chemicals they use in their workplace.

On November 25, 1983, the Occupational Safety and Health Administration published its final rule on Hazard Communication at 48 FR 53280 and 52 FR 31852 (29 CFR 12919.1200). The Hazard Communication Standard (HCS) requires all chemical manufacturers and importers to assess the hazards of the chemical which they produce or import, and all employers to

provide information concerning the hazards of such chemicals to their employees. The transmittal of hazard information to employees is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, material safety data sheets and employee training.

Since the HCS "is intended to address comprehensively the issue of evaluating the potential hazard of chemicals and communicating information concerning hazards and appropriate protective measures to employees" (52 FR 31877), OSHA proposes this new paragraph entitled "Communication of BD Hazards to Employees" to avoid repetition of those requirements now comprehensively laid out in § 1910.1200 while specifying additional particular requirements that are needed to protect employees exposed to BD. While avoiding a duplicative administrative burden on those employers attempting to comply with the requirements of several different applicable OSHA health standards, the proposed requirements nevertheless provide the necessary protection for employees through provisions for signs and labels, material safety data sheets, and employee information and training. It should be noted that the communication of BD hazards paragraph of the BD standard has been designed to be substantively as consistent as possible with the HCS requirements for employers. The HCS also addresses the responsibility of producers of chemicals to provide information to downstream employers.

The proposed standard requires that regulated areas be posted with signs stating: "Danger, 1,3-Butadiene, Potential Cancer and Reproductive Hazard, Can Cause Lung and Kidney Damage, Authorized Personnel Only, Respirators and Protective Clothing Required in this Area". The proposed standard intends that the posting of these signs will serve as a warning to employees who may otherwise not know they are entering a regulated area. Such warning signs are required to be posted whenever a regulated area exists, that is, whenever the permissible exposure limit is exceeded. For some work sites, regulated areas exist as a permanent situation, because there is an area where exposures cannot be reduced below the PEL by the use of engineering controls. In those situations, the signs are needed to warn employees not to enter the area unless they are authorized, wearing respirators, and

unless there is a need for entering the area.

Regulated areas may also exist on a temporary basis, such as during maintenance and/or emergency situations. The use of warning signs in these types of situations is also important, since a maintenance or emergency situation is by nature a new or unexpected exposure to employees who are regularly scheduled to work at these sites.

These signs are intended to supplement the training which employees are to receive under the other provisions of this paragraph, since even trained employees need to be reminded of the locations of regulated areas and of the precautions necessary to be taken before entering these dangerous areas.

The proposed standard specifies the wording of the warning signs for regulated areas in order to ensure that the proper warning is given to employees. OSHA believes that the use of the word "Danger" is appropriate, based on the evidence of the toxicity and carcinogenicity of BD. "Danger" is used to attract the attention of workers, to alert them to the fact that they are in an area where the permissible exposure limit is exceeded, and to emphasize the importance of the message that follows. The use of the word "Danger" is also consistent with other recent OSHA health standards dealing with carcinogens. The proposed standard also requires that the legend, "Respirators Required in this Area", be included on the warning sign. While OSHA recognizes that some employees entering the regulated areas may not be exposed above either the 8-hour PEL of 2 ppm or the STEL of 10 ppm as averaged over a 15-minute period, it is still possible that many employees who are assigned to work in these areas may remain in these locations for long enough periods of time so that they would be needlessly overexposed to BD without the use of respirators and protective clothing. To ensure that these employees are adequately protected, it is necessary that the sign alert them to the need to wear respirators and protective clothing.

The proposal also requires that warning labels be affixed to all shipping and storage containers containing BD. The labels must state: "Danger, Contains 1,3-Butadiene, Potential Cancer and Reproductive Hazard". It is proposed that required labels would remain affixed to containers leaving the workplace. The purpose of this requirement is to ensure that all affected employees, not only those of a particular employer, are apprised of the hazardous

nature of BD exposure where exposure could exceed the action level.

In addition to being consistent with the requirements of the HCS, these requirements are consistent with the mandate of section 6(b)(7) of the Act, which requires OSHA health standards to prescribe the use of labels or other appropriate forms of warning to apprise employees of the hazards to which they are exposed.

OSHA also proposes in this BD standard to require the employer to obtain or develop and to distribute and provide access to a material safety data sheet for BD in accordance with the requirements of 29 CFR 1910.1200(g). OSHA feels that a properly completed material safety data sheet (MSDS), if readily available to employees, can serve as an excellent, concise source of information regarding the hazards associated with BD. OSHA's primary intent in this section of the proposed standard, as stated in its recently promulgated HCS, is to ensure that employees will receive as much information as is needed concerning the hazards posed by chemicals in their workplaces. The material safety data sheet ensures that this information will be available to them in a usable, readily accessible and concise form. The material safety data sheet also serves as the central source of information to employees and downstream employers who must be provided with an MSDS if BD or a product containing BD is produced and shipped out of the plant. In addition, the MSDS serves as the basic source of information on the hazards of BD essential to the training provisions of this and other applicable health standards.

Producers and importers have the primary responsibility, under the HCS to develop or prepare the material safety data sheet. The manufacturer or importer is most likely to have the best access to information about the product, and is therefore responsible for disseminating this information to downstream users of the material. For employers whose employees' exposure to BD is from products received from outside sources, the information necessary in producing MSDS or the MSDS itself is to be obtained from the manufacturer and made available to affected employees. The requirements for the information that is to be contained on the material safety data sheet are explained in detail at 29 CFR 1910.1200(g).

Paragraph (j)(4) of this proposed BD standard requires employers to provide all employees who are exposed to BD with information and training on BD at

the time of initial assignment and at least annually thereafter. A record shall be maintained of the contents of such programs. The training program is to be in accordance with the requirements of the HCS paragraphs (h)(1) and (2), including specific information required to be provided by that section and those items stipulated in Section XIV paragraph (j)(4)(iii) of this standard. In addition, employees are to be provided with an explanation of the contents of Appendices A (Substance Safety Data Sheet, BD) and B (Substance Technical Guidelines, BD) of the BD standard. Employees are to be informed where a copy of the BD standard is accessible to them, and receive a description of the medical surveillance program required under paragraph (l) of this proposed standard. Employees are also to receive an explanation of the purpose of paragraph (l), medical surveillance program, for BD.

OSHA has determined during other rulemakings that an information and training program, as incorporated in this proposed standard in an overall "Communication of BD Hazards to Employees" paragraph, is essential to inform employees of the hazards to which they are exposed and to provide employees with the necessary understanding of the degree to which they themselves can minimize the health hazard potential. As part of an overall communication program for employees, training serves to explain and reinforce the information presented to employees on labels and material safety data sheets. These written forms of information and warning will be successful and relevant only when employees understand the information presented and are aware of the actions to be taken to avoid or minimize exposures thereby reducing the possibility of experiencing adverse health effects. Training is essential to an effective overall hazard communication program. Active employee participation in training sessions can result in the effective communication of hazard information to employees which can further result in workers taking conscientious protective actions at their job duties, thereby decreasing the possibility of occupationally-related illnesses and injuries.

OSHA proposes the training provisions of this standard to be in performance-oriented, rather than specified and detailed language. The proposed standard, in requiring training to be in accordance with the requirements of 29 CFR 1910.1200, lists the categories of information to be transmitted to employees and not the

specific ways that this is to be accomplished. The use of such performance-oriented requirements will encourage employers to tailor their training needs to their specific workplaces, thereby resulting in the most effective training program suitable for each specific workplace.

OSHA believes that the employer is in the best position to determine how the training he or she is providing is being received and absorbed by the employees. OSHA has, therefore, described the objectives to be met and the intent of its training to ensure they can help to protect themselves. The specifics of how this is to be accomplished are left up to the employer.

K. Recordkeeping: Paragraph (k)

Section 8(c)(3) of the Act provides for the promulgation of "regulations requiring employers to maintain accurate records of employee exposures to potentially toxic materials or harmful physical agents which are required to be monitored or measured under section 6." The proposed standard would require that employers who rely on objective data in order to gain exemption from the proposed monitoring requirements maintain records that show that basis and reasoning used in reaching the conclusion that the employer should be exempted. In this respect, the objective data substitute for the initial monitoring requirements and the requirement to maintain a record protects the employer at later dates from the contention that an initial monitoring was not conducted.

The proposed rule would require that employers keep records to identify the employee monitored and to accurately reflect each employee's exposure. The proposal would also require that the employer keep accurate medical records for each employee subject to medical surveillance. Section 8(c) of the Act authorizes the promulgation of regulations requiring an employer to keep necessary and appropriate records regarding activities to permit the enforcement of the Act or to develop information regarding the causes and prevention of occupational illnesses. OSHA has determined that, in this context, requiring employers to maintain both medical and exposure records (including pulmonary function test results related to respirator use and initial determinations or justifications of exemption from monitoring) is necessary and appropriate. In addition, medical records are necessary for the proper evaluation of the employee's health. Since there is no useful purpose served in long term retention of respirator fit test results, OSHA has proposed to

require keeping these test results only until the next fit testing.

The proposed standard would require that all required records be made available upon request to the Assistant Secretary and Director of NIOSH for examination and copying. Access to these records would be necessary for OSHA to monitor compliance. These records also contain information which either of the agencies may need to carry out other statutory responsibilities.

The proposed rule would provide that employees, former employees, and their designated representatives would have access to exposure determinations and records upon request. Section 8(c) (3) of the Act explicitly provides for the promulgations of regulations to "provide employees or their representatives with an opportunity to observe such monitoring or measuring and to have access to the records thereof." Several other provisions of the Act contemplate that employees and their representatives are entitled to have an active role in the enforcement of the Act. Employees and their representatives need the pertinent information concerning exposures to toxic substances and the consequences for the health and safety of the employees if they are to benefit fully from these statutorily created rights.

In addition, the proposal specifies that access to exposures and medical records by employees, designated representatives, and OSHA shall be provided in accordance with 29 CFR 1910.20. OSHA promulgated 29 CFR 1910.20 as the generic rule for access to employee exposure and medical records on May 23, 1980 (45 FR 35212). It applies to records created pursuant to specific standards and to records which are voluntarily created by employers. OSHA retains unrestricted access to medical and exposure records but its access to personally identifiable records is subject to the Agency's rules of practice and procedure concerning OSHA access to employee medical records, which have been published at 29 CFR 1913.10. An extensive discussion of the provisions and the rationale for § 1910.20 may be found at 45 FR 35312. The discussion of § 1913.20 may be found at 45 FR 35384. It is noted that revisions to the access to records standard are being developed in an ongoing rulemaking proceedings. The BD standard may be affected by any changes which result from the rulemaking effort.

It is necessary to keep records for extended periods of time because of the long latency periods commonly observed for the induction of cancer caused by exposures to carcinogens.

Cancer generally cannot be detected until 20 or more years after onset of exposure. The extended record retention period is therefore needed for two purposes. First, possession of past and present exposure data and medical records furthers the diagnosis of workers' ailments. In addition, retaining records for extended periods makes possible a review at some future date of the effectiveness and adequacy of the proposed standard.

The time periods required for retention of exposure records and medical records would be thirty years and the period of employment plus thirty years, respectively. These retention requirements would be consistent with those in the OSHA records access standard and with pertinent sections of the Toxic Substances Control Act.

The proposed standard would require employers who are going out of business without a successor to notify the Director of NIOSH in writing at least 90 days prior to the disposal of records and to transmit them to NIOSH unless told not to do so by NIOSH. The employer would be required to comply with any other applicable requirements set forth in the records retention standard.

L. Observation of monitoring: Paragraph (l)

Section 8(c) (3) of the Act requires that employers provide employees and their representatives with the opportunity to observe monitoring of employee exposures to toxic substances or harmful physical agents. In accordance with this section, the proposal contains provisions for such observation of monitoring of BD exposures.

The observer, whether an employee or a designated representative, must be provided with, and is required to use, any personal protective equipment required to be worn by employees working in the area that is being monitored, and must comply with all other applicable safety and health procedures.

M. Date: Paragraph (m)

As proposed, the final rule would become effective sixty (60) days following publication in the **Federal Register**. OSHA requests comment on whether additional time should be provided. The Agency also solicits information and supporting data on "start-up periods" and delayed implementation dates which may be necessary for various provisions of the standard.

N. Appendices: Paragraph (n)

Five appendices have been included in this proposal standard. These appendices have been included primarily for purposes of information. None of the statements contained therein should be construed as establishing a mandatory requirement not otherwise imposed by the standards, or as detracting from an obligation which the standard does impose.

The information contained in Appendices A and B is designed to aid the employer in complying with requirements of the standard. The information in Appendix C primarily provides information needed by the physician to evaluate the results of the medical examination. It should be noted that paragraph (i) specifically requires that the information contained in Appendices A and B be provided to employees as part of their information and training program.

Appendix D gives details of the OSHA sampling method for use in monitoring employee exposures to BD. Appendix E is the "Qualitative and Quantitative Fit Testing Procedures."

XII. Environmental Impact:

OSHA has reviewed the proposed standard for BD and concluded that no significant environmental impact is likely to occur from promulgation of a new standard.

On October 1, 1986, OSHA published an Advanced Notice of Public Rulemaking (ANPR) to initiate rulemaking within the meaning of section 9(a) of TSCA for occupational exposure to BD. Information and comments were solicited from the public on a variety of issues (including environmental impacts) surrounding the promulgation of a new standard. The information and comments received in response to the ANPR have been reviewed in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321, et seq.), the Council of Environmental Quality (CEQ) (40 CFR part 1500), and OSHA's DOL NEPA Procedures (29 CFR part 11). As a consequence of this review, the Assistant Secretary has determined that the proposed rule will not have a significant impact on the environment external to the workplace.

BD is a high-volume chemical used primarily in the manufacture of synthetic rubbers through the process of polymerization. The new standard for this chemical can be achieved through a combination of engineering controls, work practices, and respirator use on

the part of the crude, monomer, and polymer sectors of the BD industry.

OSHA believes that the controls that are optimal, from a cost minimizing and worker safety point of view, will have no significant adverse impact on the external environment because (1) no additional solid waste would be contaminated with BD and (2) any new release to the external atmosphere would constitute an insignificant increase in emissions. Indeed, several of the recommended controls would prove to be advantageous from an environmental point of view. For example, under current practice, rail tank cars (used for transport of crude C⁴ streams as well as for delivery of BD product) are often fitted with slip-tube gauges. While this monitoring system requires less individual attention than alternatives such as magnetic gauges, it also has the potential for direct release of BD to the atmosphere as well as to the breathing area. The proposed standard will encourage firms to use magnetic gauges because such gauges operate without the release of vapor into the atmosphere and thereby provide better protection for individuals at risk. Similarly, implementation of leak detection programs and the use of closed loop sampling techniques by industry personnel engaged in analysis and quality control, should provide better protection for both workers and the external environment.

Other engineering and non-engineering controls, such as enclosed vacuum exhaust vents in laboratories for cylinder voiding and increased respirator use, involve circumstances in which environmental emissions of BD remain constant, or, else, no causal link exists between implementation of the control and impact on the external environment.

Although transportation of BD presents the potential for leaks or spills, such contingencies are viewed as effects of events unrelated to implementation of the new standard, and under the jurisdiction and authority of the Department of Transportation.

Based on this discussion and other information presented in this proposal, OSHA concludes that there will be no significant impact on the environment external to the workplace as a consequence of the promulgation of a new standard for BD. OSHA, of course, reserves the right to perform additional environmental analyses as a consequence of the information and comments received in response to this proposal.

XIII. Request for Information and Comments

Public comment on the data discussed in this Notice and other relevant issues is requested for the purpose of assisting OSHA in its evaluation of the adequacy of the present standard and the development of a revised standard for exposure to BD. OSHA also requests that interested parties submit any pertinent health data not discussed in this notice.

Comment is requested on the following issues relating to health effects, technological and economic feasibility, and provisions which should be considered for inclusion in a final BD standard. Specifically, scientific and technical data and expert analysis and opinion are sought on the following issues:

1. Do the proposed provisions provide adequate protection for workers against all known health hazards associated with exposure to BD?

2. Does OSHA's proposed STEL of 10 ppm for BD reduce worker exposure over and above the reduction provided by the PEL? OSHA has stated that the health evidence for BD indicates that the occurrence of a dose-rate effect, provides further justification for the STEL. Are there comments on OSHA's assessment? Should other short-term exposure limits be considered?

3. Are there additional or updated epidemiological studies or updated information on exposures for the cohorts comprising the studies OSHA has included in this proposal that would be useful to the Agency in assessing the risk of occupational exposure to BD?

4. Please provide any additional information that OSHA should consider in developing its estimates of risk. OSHA is especially interested in receiving information on how BD has affected employee sickness, absences, productivity, and the concentrations at which such effects occur.

5. What is the lowest feasible level of exposure achievable by engineering controls and work practices? For example, can BD exposures be reduced by available technologies to levels below the proposed 2 ppm PEL.

6. OSHA solicits comments on the statistical analytical methodology determining the feasibility of the proposed PELs. In this approach the PELs are assumed to be feasible if, after the addition of a control measure, at least 95% of the occupational group is found to be at or below the PELs. In addition, OSHA's analysis assumed that respirators would be used by all members of a given occupational group

whenever the probability of exposure above the PELs for that group was greater than 5%.

7. OSHA has proposed that all employees who must wear a respirator but do not meet the 10-day minimum exposure requirement for inclusion in medical surveillance be offered at least a cardiopulmonary examination that includes a pulmonary function test. Is this appropriate or should this group of respirator wearers' (i.e. those exposed above the PELs between 1 and 9 days each year) eligibility for the cardiopulmonary system evaluation be subject to a certain minimum exposure period? If so, what should that exposure period be?

8. Should OSHA adopt the respiratory protection provisions contained in the proposed Methods of Compliance standard (54 FR 23991) instead of the current language in the BD Proposal? If so, are there modifications that would need to be made in the provision of that proposed standard in order to provide appropriate protection against exposures to this specific substance?

9. The methods of compliance proposal does not require employers to institute all feasible engineering controls when only a negligible reduction in exposure is thereby achieved. Instead of using "negligible reduction" as the cut-off-point, should OSHA quantify the boundaries of exposure reduction and subsequent attainment level? If quantifiable boundaries of exposure reduction are included, should they take into consideration only health concerns or should they also incorporate safety hazards (e.g. flammability, explosivity)?

10. Please provide any additional information on feasible engineering and work practice controls that would lower workers exposure to 2 ppm or lower levels? Please include the cost and time necessary for their implementation.

11. Are there any unique conditions in work settings where BD is produced or used where engineering controls are not available or feasible?

12. What are the technological modifications in the production or use of BD for the purpose of improving productivity or product quality which have also resulted in changes (reductions or increases) in BD exposures?

13. Is Medical Removal Protection (MRP) beneficial for employees due to the risk of material impairment to health and what should these provisions be? Please provide information and data supporting your views.

14. Are all the medical tests specified in this rulemaking appropriate for enhancing early detection of adverse health effects resulting from BD

exposure? If not, please identify those regarded to be inappropriate and give the specifics of the reasons.

15. What additional provisions for medical surveillance should be included? What kind of clinical tests should be offered to employees exposed in emergency situations?

16. Does the coverage of employees under medical surveillance include all employees whose exposures warrant coverage? If not, how should the coverage be expanded? If the present requirements for inclusion are retained, how much of the total BD-exposed workforce will be eligible to participate?

17. Please provide information supporting the inclusion of provisions for medical examinations, respirators, personal protective clothing and equipment, hygiene facilities and practices, emergencies, regulated areas, maintenance of records, housekeeping, employee information and training, and labels and signs? What form should such provisions take in the final standard? To what extent are these provisions currently being employed by industry and what are their costs?

18. Are there conditions under which respirator use should be permitted in addition to those proposed? Can employees who wear negative pressure respirators be adequately protected without quantitative fit testing? What specific limits should be placed on canister and cartridge lives? Please provide additional information on breakthrough time of various respirators.

19. What measurement and analytical methods are available for use in determining compliance with the BD proposed PEL of 2 ppm or the 1 ppm action level? Can these methods measure the proposed STEL of 10 ppm? How accurate are these methods? Are there any special conditions for sample collection and preservation that should be included in the final standard so that reliable results can be obtained?

20. Should work places relying on objective data to document the fact that employees are not exposed at or above the action level be required to install alarm devices sensitive to concentrations at or below the action level? Are passive diffusion devices reliable to detect short term exposure of employees to BD? Can they detect levels as low as 1 ppm?

21. What are the numbers of workers exposed to BD, their current exposure levels, the methods of monitoring used to measure these exposures, duration and frequency of exposure, the duties being performed, and the Standard Industrial Classification (SIC) Codes for industries and processes handling BD?

22. Should the standard include specific provisions prohibiting activities that are known to result in excessive exposures such as, but not limited to, open loop sampling? Should the standard include provisions specifying controls that are known or proven to be effective in reducing workers' exposure such as but not limited to the use of tandem seal in pumps?

23. Has OSHA accurately estimated all costs associated with achieving compliance with the proposed new rule? Are those costs economically feasible for the affected industries? How would the time allowed to install these engineering controls affect these costs?

24. The BD record includes copies of the Regulatory Impact Analysis and the JACA report. Comments are requested on those analyses, the feasibility and the cost-effectiveness of the proposed standard and alternatives.

25. OSHA is requesting public comments on the feasibility and cost effectiveness of the two monitoring methods, leak detection and continuous monitoring, as well as any other feasible methods. Leak detection and continuous monitoring are discussed above in the Technological Feasibility section of the Summary of Preliminary Regulatory Impact and Regulatory Flexibility Analysis and in the Methods of Compliance section of the Summary and Explanation of the Proposed Standard.

26. In order to perform an economic feasibility analysis, it is helpful to have a financial and economic profile of the industries producing and using BD. Information is requested to aid in the preparation of that profile. Data should be provided for the last five years.

27. How does the proposed standard affect industry's economic position, particularly with regard to foreign import competition in the domestic U.S. market, and the price of U.S. goods for export?

28. The Agency has prepared a draft Regulatory Flexibility Analysis analyzing the impacts of the proposed standard on the small businesses which OSHA believes may be affected and adapting the proposed standard to take into account the circumstances of small business where appropriate. The following information is requested for small businesses in addition to the information OSHA has gathered.

(a) What kinds of small businesses or organizations and how many of them would be affected by regulating exposures to BD?

(b) Which, if any, federal rules may duplicate, overlap, or conflict with an OSHA regulation concerning BD?

(c) Will difficulties be encountered by small entities when attempting to comply with requirements of the proposed standard? Can some of the requirements be deleted or simplified for small entities, while still achieving comparable protection for the health of employees of small entities?

(d) What timetable would be appropriate to allow small entities sufficient time to comply?

29. The National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321 et seq.) requires that each Federal agency consider the environmental impact of major actions significantly affecting the quality of the human environment. Any person having information, data, or comments pertaining to possible environmental impacts is invited to submit them along with accompanying documentation to OSHA. Such impacts might include:

(a) Any positive or negative environmental effects that could result should a standard be adopted;

(b) Beneficial or adverse relationships between the human environment and productivity;

(c) Any irreversible commitments of natural resources which could be involved should a standard be implemented; and

(d) Estimates of the degree of reduction of BD and other hydrocarbons in the environment by the proposed OSHA standard and alternatives.

In particular, consideration should be given to the potential direct or indirect impacts of any action, or alternative actions, on water and air pollution, energy usage, solid waste disposal, or land use.

XIV. Public Participation—Notice of Hearing

Interested persons are invited to submit written data, views, and arguments with respect to this proposed standard. These comments must be postmarked on or before September 28, 1990, and submitted in quadruplicate to the Docket Officer, Docket No. H-041, Room N-2625, U.S. Department of Labor, Third Street and Constitution Avenue NW., Washington, DC 20210. Comments limited to 10 pages or less also may be transmitted by facsimile to (202) 523-5986 or (for FTS) 8-523-5986, provided the original and 3 copies are sent to the Docket Officer thereafter.

Written submissions must clearly identify the provisions of the proposal which are addressed and the position taken with respect to each issue. The data, views, and arguments that are submitted will be available for public inspection and copying at the above address. All timely written submissions

will be made a part of the record of the proceeding.

Pursuant to section 6(b)(3) of the Act, an opportunity to submit oral testimony concerning the issues raised by the proposed standard including economic and environmental impacts, will be provided at two informal public hearings scheduled to begin at 10 a.m. on dates as follows: Washington, DC: December 11, 1990, in the Auditorium, Frances Perkins Building, U.S. Department of Labor, Third Street and Constitution Avenue, NW., Washington, DC 20210, and to begin at 10 a.m. on January 8, 1991 in New Orleans, Louisiana in the Le Pavillion Hotel (Denechaud Room) 833 Poydras Street, Telephone no. 504-581-3111.

A. Notice of Intention To Appear

All persons desiring to participate at the hearing must file in quadruplicate a Notice of Intention to Appear, postmarked on or before September 28, 1990, addressed to Mr. Tom Hall, OSHA Division of Consumer Affairs, Docket No. H-041, Room N-3649, U.S. Department of Labor, Third Street and Constitution Avenue, NW., Washington, DC 20210; telephone 202-523-8615. A Notice of Intention to Appear also may be transmitted by facsimile to 202-523-5986 or to 8-523-5986 (for FTS), provided the original and 3 copies of the Notice are sent to the above address thereafter.

The Notices of Intention to Appear, which will be available for inspection and copying at the OSHA Technical Data Center, Docket Office (Room N-2625), telephone 202-523-7894, must contain the following information:

- (1) The name, address, and telephone number of each person to appear;
- (2) The capacity in which the person will appear;
- (3) The approximate amount of time requested for the presentation;
- (4) The specific issues that will be addressed;
- (5) A statement of the position that will be taken with respect to each issue addressed;
- (6) Whether the party intends to submit documentary evidence, and if so, a brief summary of that evidence; and
- (7) Which hearing the party wishes to testify.

B. Filing of Testimony and Evidence Before Hearing

Any party requesting more than 10 minutes for a presentation at the hearings, or who will submit documentary evidence, must provide in quadruplicate the complete text of his or her testimony, including any documentary evidence to be presented at the hearing, to the OSHA Division of

Consumer Affairs. This material must be postmarked on or before October 19, 1990. The material will be available for inspection and copying at the Technical Data Center Docket Office. Each such submission will be reviewed in light of the amount of time requested in the Notice of Intention to Appear. In those instances where the information contained in the submission does not justify the amount of time requested, a more appropriate amount of time will be allocated and the participant will be notified of that fact.

Any party who has not substantially complied with this requirement may be limited to a 10 minute presentation, and may be requested to return for questioning at a later time. Any party who has not filed a Notice of Intention to Appear may be allowed to testify, as time permits, at the discretion of the Administrative Law Judge.

OSHA emphasizes that the hearing is open to the public, and that interested persons are welcome to attend. However, only persons who have filed proper Notices of Intention to Appear at the hearing will be entitled to ask questions and otherwise participate fully in the proceedings.

C. Conduct and Nature of Hearing

The Washington, DC and the New Orleans hearings will commence at 10 a.m. on December 11, and January 8, 1991 respectively. At that time any procedural matters relating to the hearing will be resolved.

The nature of the informal rulemaking hearings to be held is established in the legislative history of section 6 of the Act and is reflected by the OSHA hearing regulations (see 29 CFR 1911.15(a)). Although the presiding officer is an Administrative Law Judge and questioning by interested persons is allowed on crucial issues, it is clear that the proceedings shall remain informal and legislative in type. The essential intent is to provide an opportunity for effective oral presentation by interested persons which can be carried out expeditiously and in the absence of rigid procedures which might unduly impede or protract the rulemaking process.

The hearing will be conducted in accordance with 29 CFR part 1911. The hearing will be presided over by an Administrative Law Judge who will have all the powers necessary and appropriate to conduct a full and fair informal hearing as provided in 29 CFR part 1911 including the powers:

1. To regulate the course of the proceedings;
2. To dispose of procedural requests, objections and comparable matters;

3. To confine the presentation to the matters pertinent to the issues raised;

4. To regulate the conduct of those present at the hearing by appropriate means;

5. In the Judge's discretion, to question and permit the questioning of any witness and to limit the time for questioning; and

6. In the Judge's discretion, to keep the record open for a reasonable stated time to receive written information and additional data, views, and arguments from any person who has participated in oral proceedings.

D. Certification of Record and Final Determination After the Hearing

Following the close of the hearing and post-hearing comment period, the presiding Administrative Law Judge will certify the record to the Assistant Secretary of Labor for Occupational Safety and Health. The Administrative Law Judge does not make or recommend any decisions as to the content of the final standard.

The proposed standard will be reviewed in light of all oral and written submissions received as part of the record, and a permanent standard for occupational exposure to BD, will be issued, based upon the entire record in the proceeding including the written comments and data received from the public.

E. Authority

This document was prepared under the direction of Gerard F. Scannell, Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, 200 Constitution Avenue, NW., Washington DC 20210.

Pursuant to sections 4, 6(b), 8(c) and 8(g) of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657), 29 CFR part 1911 and Secretary of Labor's Order Nos. 12-71 (36 FR 8754), 8-76 (41 FR 25059), 9-83 (48 FR 35736) or 1-90 (55 FR 9033) as applicable, it is hereby proposed to amend part 1910 of 29 CFR by adding new § 10.1051 as set forth below and deleting the reference to BD from table Z-1 of section 1910.1000. In addition, pursuant to section 4(b)(2) of the Act, OSHA has determined that this new standard would be more effective than the corresponding standards now in subpart B of part 1910, and in parts 1915, 1918, and 1926 of title 29, Code of Federal Regulations. Therefore, these corresponding standards would be superseded by this new § 1910.1051. This determination, and the application of the new standard to the maritime and construction industries, would be implemented by adding a new paragraph (1) to § 1910.19.

List of Subjects in 29 CFR Part 1910

1,3-Butadiene, Occupational safety and health, Chemicals, Cancer, Health Risk—assessment.

Signed at Washington, DC, this 17th day of July 1990

Gerard Scannell,

Assistant Secretary of Labor.

XV. Proposed Standard and Appendices

General Industry

Part 1910 of title 29 of the Code of Federal Regulations is proposed to be amended as follows:

PART 1910—[AMENDED]

Subpart B—[Amended]

1. The authority citation for subpart B of part 1910 is revised to read as follows:

Authority: Secs. 4, 6 and 8 of the Occupational Safety and Health Act, 29 U.S.C. 653, 655, 657; Walsh-Healey Act, 41 U.S.C. 35 *et seq.*; Service Contract Act of 1965, 41 U.S.C. 351 *et seq.*; sec. 107, Contract Work Hours and Safety Standards Act (Construction Safety Act), 40 U.S.C. 333; sec. 41, Longshoremen's and Harbor Workers' Compensation Act, 33 U.S.C. 941; National Foundation of Arts and Humanities Act, 20 U.S.C. 951 *et seq.*; Secretary of Labor's Order No. 12-71 (36 FR 8754); 8-76 (41 FR 25059); 9-83 (48 FR 35736) or 1-90 (55 FR 9033), as applicable, and 29 CFR part 1911.

Sections 1910.16 and 1910.19 also issued under 29 CFR part 1911.

2. By adding a new paragraph (1) to § 1910.19 to read as follows:

§ 1910.19 Special provisions for air contaminants.

(1) 1,3-Butadiene (BD): Section 1910.1051 shall apply to the exposure of every employee to BD in every employment and place of employment covered by §§ 1910.12, 1910.13, 1910.14, 1910.15, or 1910.16, in lieu of any different standard on exposure to BD which would otherwise be applicable by virtue of those sections.

Subpart Z—[Amended]

3. The authority citation for subpart Z of 29 CFR part 1910 is revised to read as follows:

Authority: Secs. 4, 6 and 8, Occupational Safety and Health Act, 29 U.S.C. 653, 655, 657, Secretary of Labor's Orders Nos. 12-71 (36 FR 8754), 8-76 (41 FR 25059), 9-83 (48 FR 35736), or 1-90 (55 FR 9033), as applicable, and 29 CFR part 1911.

All of subpart Z issued under section 6(b) of the Occupational Safety and Health Act, 29 U.S.C. 655(b), except those substances listed in the Final Rule Limits column of Table Z-1-A, which have identical limits

listed in the Transitional Limits columns of Table Z-1-A, Table Z-2 or Table Z-3. The latter were issued under section 6(a) (29 U.S.C. 655(a)).

Section 1910.1000, the Transitional Limits columns of Table Z-1-A, Table Z-2 and Z-3 also issued under 5 U.S.C. 553. Section 1910.1000, Tables Z-1-A, Z-2 and Z-3 not issued under 29 CFR part 1911 except for the arsenic, benzene, cotton dust and formaldehyde listings.

Section 1910.1001 also issued under section 107 of Contract Work Hours and Safety Standards Act, 40 U.S.C. 333.

Section 1910.1002 not issued under 29 U.S.C. 655 or 29 CFR part 1911; also issued under 5 U.S.C. 553.

Section 1910.1003 through 1910.1013 also issued under 29 U.S.C. 653.

Section 1910.1025 also issued under 29 U.S.C. 653 and 5 U.S.C. 553.

Section 1910.1028 also issued under 29 U.S.C. 653.

Section 1910.1043 also issued under 5 U.S.C. 551 *et seq.* Section 1910.1045 and 1910.1047 also issued under 29 U.S.C. 653.

Section 1910.1048 also issued under 29 U.S.C. 653.

Section 1910.1051 also issued under 29 U.S.C. 653.

Section 1910.1200, 1910.1499 and 1910.1500 also issued under 5 U.S.C. 553.

§ 1910.1000 [Amended]

4. By deleting the entry "Butadiene (1,3-Butadiene) 1-000 ppm, 2000 mg/m³" from table Z-1-A of § 1910.1000.

5. By adding a new § 1910.1051 to read as follows:

§ 1910.1051 1,3-Butadiene.

(a) *Scope and application.* (1) This section applies to all occupational exposures to 1,3-Butadiene (BD), Chemical Abstracts Service Registry No. 106-99-0 except as provided in paragraph (a)(2) of this section.

(2) This section does not apply to the processing, use, or handling of products containing BD where objective data are reasonably relied upon that demonstrate that the product is not capable of releasing BD in airborne concentrations at or above the action level or in excess of the STEL under the expected conditions of processing, use, or handling that will cause the greatest possible release.

(3) Where products containing BD are exempted under paragraph (a)(2) of this section, the employer shall maintain records of the objective data supporting that exemption and the basis for the employer's reliance on the data, as provided in paragraph (k)(1) of this section.

(b) *Definitions:* For the purpose of this section, the following definitions shall apply:

Action level means a concentration of airborne BD of 1.0 ppm calculated as an eight (8)-hour time-weighted average.

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

Authorized person means any person specifically authorized by the employer whose duties require the person to enter a regulated area, or any person entering such an area as a designated representative of employees for the purpose of exercising the right to observe monitoring and measuring procedures under paragraph (1) of this section, or any other person authorized by the Act or regulations issued under the Act.

1,3-Butadiene means an organic compound with chemical formula $\text{CH}_2=\text{CH}-\text{CH}=\text{CH}_2$. The chemical "1,3-butadiene" (Chemical Abstracts Registry Number 106-99-0) is a colorless, noncorrosive, flammable gas with a mild aromatic odor at standard ambient temperature and pressure. It has a molecular weight of 54.1, a boiling point of -4.7°C at 760 mm Hg, a lower explosive limit of 2%, and an upper explosive limit of 11.5%. Its vapor is almost twice that of air. It is slightly soluble in water, somewhat soluble in methanol and ethanol, and readily soluble in less polar organic solvents such as hexane, benzene, and toluene. It is highly reactive, dimerizes to 4-vinylcyclohexene, and polymerizes easily. Because of its low odor threshold, high flammability and explosiveness, BD has been handled with extreme care in the industry.

Day means any part of a calendar day.

Director means the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designee.

Emergency means any occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment that may or does result in an unexpected significant release of BD.

Employee exposure means exposure to airborne BD which would occur if the employee were not using respiratory protective equipment.

Regulated area means any area where airborne concentrations of BD exceed or can reasonably be expected to exceed the permissible exposure limits, either the 8-hour time weighted average exposure of 2 ppm or the short-term exposure limit of 10 ppm for 15 minutes.

(c) *Permissible exposure limits (PELs)*—(1) *Time-weighted average*

(TWA) limit. The employer shall ensure that no employee is exposed to an airborne concentration of BD in excess of two (2) parts BD per million parts of air (2 ppm) as an eight (8)-hour time-weighted average (8-hour TWA).

(2) *Short-term exposure limit (STEL)*. The employer shall ensure that no employee is exposed to an airborne concentration of BD in excess of ten parts of BD per million parts of air (10 ppm) as determined over a sampling period of fifteen (15) minutes.

(d) *Exposure monitoring*—(1) *General*. (i) Determinations of employee exposure shall be made from breathing zone air samples that are representative of the 8 hour TWA and 15 minute short-term exposure of each employee.

(ii) Representative 8-hour TWA employee exposure shall be determined on the basis of one or more samples representing full-shift exposure for each shift for each job classification in each work area.

(iii) Representative 15 minutes short-term employee exposures shall be determined on the basis of one or more samples representing 15 minutes exposures associated with operations that are most likely to produce exposures above the STEL for each shift for each job classification in each work area.

(iv) Except for initial monitoring as required under paragraph (d)(2) of this section, where the employer can document that exposure levels are equivalent for similar operations in different work shifts, the employer need only determine representative employee exposure for that operation during one shift on which the highest exposure is expected.

(2) *Initial monitoring*. (i) Each employer who has a workplace or work operation covered by this standard, except as provided for in paragraph (a)(2) of this section, shall perform initial monitoring to determine accurately the airborne concentrations of BD to which employees may be exposed.

(ii) The initial monitoring required under paragraph (d)(2)(i) of this section shall be completed within 60 days of the effective date of this standard or the introduction of BD into the workplace.

(iii) Where the employer has monitored within one year prior to the effective date of this standard and the monitoring satisfies all other requirements of this section, the employer may rely on such earlier monitoring results to satisfy the requirements of paragraph (d)(2)(i) of this section, provided that the conditions under which the initial monitoring was conducted remain unchanged.

(3) *Periodic Monitoring and its frequency*. (i) If the monitoring required by paragraph (d)(2) of this section reveals employee exposure at or above the action level but at or below both the 8-hour TWA limit and the 15-minute STEL, the employer shall repeat such monitoring for each such employee at least every six months.

(ii) If the monitoring required by paragraph (d)(2)(i) of this section reveals employee exposure above the 8-hour TWA limit, the employer shall repeat such monitoring for each such employee at least every three months.

(iii) If the monitoring required by paragraph (d)(2) of this section reveals employee exposure above the 15-minute STEL, the employer shall repeat such monitoring for each such individual at least every three months to evaluate exposures to employees subject to short term exposures.

(iv) The employer may alter the monitoring schedule from every three months to every six months for any employee for whom two consecutive measurements taken at least 7 days apart indicate that the employee's exposure has decreased to or below the 8-hour TWA, but is at or above the action level.

(4) *Termination of monitoring*. (i) If the initial monitoring required by paragraph (d)(2) of this section reveals employee exposure to be below the action level and at or below the 15-minute STEL, the employer may discontinue the monitoring for those employees whose exposures are represented by the initial monitoring except as otherwise required by paragraph (d)(5) of this section. If the periodic monitoring required by paragraph (d)(3) of this section reveals that employee exposures, as indicated by at least two consecutive measurements taken at least 7 days apart, are below the action level and at or below that STEL, the employer may discontinue the monitoring for those employees who are represented by such monitoring except as otherwise required by paragraph (d)(5) of this section.

(5) *Additional monitoring*. (i) The employer shall institute the exposure monitoring required under paragraphs (d)(2) and (d)(3) of this section whenever there has been a change in the production, process, control equipment, personnel or work practices that may result in new or additional exposures to BD or when the employer has any reason to suspect that a change may result in new or additional exposures.

(ii) Whenever spills, leaks, ruptures or other breakdowns occur that may lead to employee exposure above the action

level or above the STEL, the employer shall repeat the monitoring which is required by paragraph (d)(2)(i) of this section after the clean up of the spill or repair of the leak, rupture or other breakdown.

(6) *Accuracy of monitoring.* Monitoring shall be accurate, to a confidence level of 95 percent, to within plus or minus 25 percent for airborne concentrations of BD at or above the 2 ppm TWA limit and to within plus or minus 35 percent for airborne concentrations of BD at or above the action level of 1.0 ppm and below the 2 ppm TWA limit.

(7) *Employee notification of monitoring results.* (i) The employer shall, within 15 working days after the receipt of the results of any monitoring performed under this standard, notify the affected employee of these results in writing either individually or by posting of results in an appropriate location that is accessible to affected employees.

(ii) The written notification required by paragraph (d)(7)(i) of this section shall contain the corrective action being taken by the employer to reduce employee exposure to or below the 8 hour TWA limit or STEL, wherever monitoring results indicated that the 8-hour TWA or the 15-minute STEL has been exceeded.

(e) *Regulated areas.* (1) The employer shall establish a regulated area wherever occupational exposures to airborne concentrations of BD may exceed the permissible exposure limits, either the 8-hour TWA of 2 ppm or 15-minute STEL of 10 ppm.

(2) Access to regulated areas shall be limited to authorized persons.

(3) Regulated areas shall be demarcated from the rest of the workplace in any manner that minimizes the number of employees exposed to BD within the regulated area.

(4) An employer at a multiemployer worksite who establishes a regulated area shall communicate the access restrictions and locations of these areas to other employers with work operations at that worksite.

(f) *Methods of compliance—(1) Engineering controls and work practices.*

(i) The employer shall institute engineering controls and work practices to reduce and maintain employee exposure to or below the permissible exposure limits, except to the extent that the employer can establish that these controls are not feasible or where paragraph (g)(1) of this section applies.

(ii) Wherever the feasible engineering controls and work practices which can be instituted are not sufficient to reduce

employee exposure to or below the PEL the employer shall use them to reduce employee exposure to the lowest levels achievable by these controls and shall supplement them by the use of respiratory protection that complies with the requirements of paragraph (g) of this section.

(2) *Compliance program.* (i) Where any exposures are over the PELs the employer shall establish and implement a written program to reduce employee exposure to or below the PELs primarily by means of engineering and work practice controls, as required by paragraph (f)(1) of this section, and by the use of respiratory protection where required or permitted under this section. No compliance plan is required if all exposures are under the PELs.

(ii) The written compliance program shall include a schedule for development and implementation of the engineering controls and work practice controls including periodic leak detection surveys and a written plan for emergency situations, as specified in paragraph (h)(1)(i) of this section.

(iii) Written plans for a program required in paragraph (f)(2) of this section shall be furnished upon request for examination and copying to the Assistant Secretary, the Director, affected employees and designated employee representatives. Such plans shall be reviewed at least every 12 months, and shall be updated as necessary to reflect significant changes in the status of the employer's compliance program.

(iv) The employer shall not implement a schedule of employee rotation as a means of compliance with the PELs.

(g) *Respiratory protection and personal protective equipment—(1) General.* The employer shall provide respirators, and ensure that they are used, where required by this section. Respirators shall be used in the following circumstances.

(i) During the time interval necessary to install or implement feasible engineering and work practice controls;

(ii) In work operations, such as maintenance and repair activities, vessel cleaning, or other activities for which engineering and work practice controls are demonstrated to be infeasible, and exposures are intermittent in nature and limited in duration;

(iii) In work situations where feasible engineering and work practice controls are not yet sufficient to reduce exposure to or below the PELs; and

(iv) In emergencies.

(2) *Respirator selection.* (i) Where respirators are required or allowed

under this section, the employer shall select and provide, at no cost to the employee, the appropriate respirator as specified in Table 1, and shall ensure that the employee uses the respirator provided.

TABLE 1—MINIMUM REQUIREMENTS FOR RESPIRATORY PROTECTION FOR AIRBORNE BD

Concentration of Airborne BD (ppm) or condition of use	Minimum required respirator
If less than or equal to 50 PPM.	(a) Full facepiece air-purifying respirator equipped with organic vapor or BD approved canister, front or back-mounted (industrial sized). (b) Hood or helmet powered air-purifying respirator equipped with organic vapor or BD approved canister. (c) Continuous-flow supplied air respirator equipped with hood or helmet.
If concentration exceeds 50 PPM.	(a) Full facepiece powered air purifying respirator equipped with Organic Vapor or BD approved canister. (b) Full facepiece self-contained breathing apparatus operated in negative pressure (demand) mode. (c) Full facepiece supplied-air respirator operated in pressure demand or other positive pressure mode. (d) Full facepiece self-contained breathing apparatus operated in pressure demand or other positive pressure mode. (e) Full facepiece pressure demand (a) or other supplied-air respirator with auxiliary self-contained air supply.
Firefighting, or unknown concentration (such as in emergencies).	(a) Full facepiece self-contained breathing apparatus operated in pressure demand or other positive pressure mode.
Escape	(a) Any respirator described above.

NOTE: Respirators approved for use in higher concentrations are permitted to be used in lower concentrations.

(ii) The employer shall select respirators from among those jointly approved by the Mine Safety and Health Administration (MSHA) or by the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR Part 11. Negative pressure respirators shall have filter

element, approved by MSHA/NIOSH for organic vapors or BD.

(iii) Any employee who cannot wear a negative pressure respirator shall be given the option of wearing a respirator with less breathing resistance such as a powered air-purifying respirator or supplied air respirator.

(3) *Respirator program.* Where respiratory protection is required by this section, the employer shall institute a respirator program in accordance with 29 CFR 1910.134(b), (d), (e), and (f).

(4) *Respirator use.* (i) Where air-purifying respirators are used, the employer shall replace the air purifying element at 90% the expiration of service life or at the beginning of each shift in which they will be used, whichever comes first. The employer shall assure that each filter element is dated at the beginning of use.

(ii) If an air purifying element becomes available with a clearly visible end of useful life indicator for BD approved by MSHA/NIOSH, the element may be used until such time as the indicator shows no further useful life.

(iii) Organic vapor canisters for BD shall have a minimum service life of four hours when tested under the maximum concentration expected in the work environment.

(iv) The employer shall permit employees who wear respirators to leave the regulated area to wash their faces and respirator facepieces as necessary in order to prevent skin irritation associated with respirator use or to change the filter elements of air-purifying respirators whenever they detect a change in breathing resistance or chemical vapor breakthrough.

(5) *Respirator fit testing.* (i) The employer shall perform either qualitative or quantitative fit testing as required under 29 CFR 1910.134 for employees who must wear tight fitting negative or positive pressure respirators. The test shall be used to select a respirator facepiece which exhibits minimum leakage and provides the required protection as prescribed in Table 35. The employer shall provide and assure that the employee wears a respirator demonstrated by the fit test to provide the required protection.

(ii) The employer shall follow the test protocols outlined in appendix E of this standard for whichever type of fit testing the employer chooses.

(6) *Protective Clothing and Equipment.* Personal protective clothing and equipment shall be worn where appropriate to prevent eye contact and limit dermal exposure to liquified BD and solutions containing BD. Protective clothing and equipment shall be

provided by the employer at no cost to the employee and the employer shall assure its use where appropriate. Eye and face protection shall meet the requirements of 29 CFR 1910.133.

(h) *Emergency situations—(1) Written plan.* (i) A written plan for emergency situations shall be developed, or an existing plan shall be modified to contain the elements specified in 29 CFR 1910.38, "Employee emergency plans and fire prevention plans," for each workplace where there is a possibility of an emergency. Appropriate portions of the plan shall be implemented in the event of an emergency.

(ii) The plan shall specifically provide that employees engaged in correcting emergency conditions shall be equipped with respiratory protection as required by paragraph (g) of this section until the emergency is abated.

(2) *Alerting employees.* Where there is the possibility of employee exposure to BD due to an emergency, means shall be developed to alert potentially affected employees of such occurrences promptly. Affected employees shall be immediately evacuated from the area in the event that an emergency occurs.

(i) *Medical surveillance—(1) Employees covered.* (i) The employer shall institute medical surveillance programs for employees exposed to BD at concentrations at or above the action level (AL) for at least 30 days a year or for employees who are or may be exposed to BD at or above the PEL or STEL for at least 10 days a year.

(ii) The employer shall make available a medical evaluation of the cardiopulmonary function for all employees whose exposures require them to use respirators regardless of the duration of exposure.

(iii) The employer shall make medical surveillance available for all employees exposed to BD in an emergency.

(2) *Examination by a physician.* (i) All medical procedures shall be performed by or under the supervision of a licensed physician and all laboratory tests are to be conducted by an accredited laboratory. All examinations and procedures shall be provided without cost to the employee, without loss of pay, and at a reasonable time and place. Persons other than licensed physicians who administer pulmonary function tests required by this standard shall complete a training course in spirometry sponsored by an appropriate governmental, academic, or professional institution.

(ii) For any employee required to use a respirator, the examining physician shall certify his or her ability to use a respirator.

(3) *Frequency of examinations.* The employer shall make available medical examinations and consultations to each employee covered under paragraph (i)(1) of this standard on the following schedules:

(i) Within 60 days of the effective date of this standard, or before the time of initial assignment of the employee.

(ii) Annually.

(iii) At termination of employment or reassignment to an area where exposure to BD is consistently below the action level, if three months or more have elapsed since last annual medical examination.

(iv) Immediately after every emergency.

(4) *Content.* Medical examinations made available pursuant to paragraphs (i)(1) of this standard shall include:

(i) A detailed occupational and medical history with particular emphasis on:

(A) Medicine taken or exposure to other chemicals that adversely affect the hematopoietic or reticuloendothelial systems;

(B) Any reproductive difficulties;

(C) Any other information determined by the examining physician to be necessary.

(ii) A thorough physical examination. For workers required to wear respirators, the physician shall direct special attention to the cardiopulmonary system.

(iii) A complete blood count including platelet count.

(iv) Any other appropriate test which the examining physician deems necessary by sound medical practice.

(5) *Additional examinations and referrals.* (i) Where the results of the medical examination indicate abnormalities of the hematopoietic or reticuloendothelial systems for which no non-occupational cause is known, the examining physician shall refer the employee to an appropriate specialist for further evaluation and the employer shall assure that these tests are provided.

(ii) Following an emergency exposure, medical surveillance shall be made available pursuant to paragraph (i)(1)(iii) and (i) (3)(iv) of this section and shall include a complete blood count following the exposure and at three months, six months, and twelve months thereafter.

(iii) The content of the medical examinations or consultations made available pursuant to paragraph (i)(4) of this standard shall be determined by the examining physician and shall include evaluation of fertility and other tests, if

requested by the employee and deemed appropriate by the physician.

(6) *Information provided to the physician.* The employer shall provide the following information to the examining physician and to any specialist involved in the diagnosis:

(i) A copy of this regulation including its appendices;

(ii) A description of the affected employee's duties as they relate to the employee's exposure;

(iii) The employee's actual or representative exposure level during his employment tenure including frequency of abnormal events (emergencies);

(iv) A description of any personal protective equipment used or to be used; and

(v) Information from previous employment-related medical examinations of the affected employee which is not otherwise available to the examining physician or the specialist.

(7) *Physician's written opinion.* (i) For each examination required by this standard, the employer shall obtain and provide the employee with a copy of the examining physician's written opinion within 15 days of the examination. The written opinion shall be limited to the following information:

(A) The occupationally pertinent results of the medical examination and tests;

(B) The physician's opinion concerning whether the employee has any detected medical conditions which would place the employee's health at greater than normal risk of material impairment from exposure to BD. Clinical and any other test results shall be used by the physician to support his/her findings and recommendations;

(C) The physician's recommended limitations upon the employee's exposure to BD or upon the employee's use of protective clothing or equipment and respirators; and

(D) A statement that the employee has been informed by the physician of the results of the medical examination and any medical conditions resulting from BD exposure which require further explanation or treatment.

(ii) The written opinion obtained by the employer shall not reveal specific records, findings, and diagnoses that have no bearing on the employee's ability to work with BD or other regulated substances.

(j) *Communication of 1,3-Butadiene hazards to employees—(1) Warning Signs.* (i) Warning signs shall be provided and displayed in regulated areas. In addition, warning signs shall be posted at all approaches to regulated areas so that an employee may read the

signs and take necessary protective steps before entering the area.

(ii) The warning signs required by paragraph (j)(1)(i) of this section shall bear the following information.

DANGER. 1,3-BUTADIENE. POTENTIAL CANCER AND REPRODUCTIVE HAZARD. CAN CAUSE LUNG AND KIDNEY DAMAGE. AUTHORIZED PERSONNEL ONLY. RESPIRATORS AND PROTECTIVE CLOTHING REQUIRED IN THIS AREA

(2) *Warning Labels.* (i) Shipping and storage containers containing BD, shall bear appropriate warning labels, as specified in paragraph (j)(2)(ii) of this section.

(ii) The labels shall comply with the requirements of the Hazard Communication Standard 29 CFR 1910.1200(f) (general industry) and 29 CFR 1926.59 (construction industry), and shall include the following information:

DANGER. CONTAINS 1,3-BUTADIENE. POTENTIAL CANCER AND REPRODUCTIVE HAZARD

(3) *Material safety data sheets.* Employers who are manufacturers or importers of BD shall comply with the requirements regarding development and distribution of material safety data sheets as specified in 29 CFR 1910.1200(f) of OSHA's Hazard Communication Standard. All employers with employees potentially exposed to BD shall maintain material safety data sheets and provide their employees with access to them, in accordance with the requirements of 29 CFR 1910.1200(g) and 29 CFR 1926.59(g).

(4) *Employee information and training.* Employers shall provide employees with information and training in accordance with the requirements of the Hazard Communication Standard, 29 CFR 1910.1200(h) (general industry), and 29 CFR 1926.59(h) (construction industry). In addition:

(i) The employer shall institute a training program for all employees who are potentially exposed to BD at or above the action level or the STEL, assure employee participation in the program and maintain a record of the contents of such program.

(ii) Training shall be provided prior to or at the time of initial assignment to a job potentially involving exposure to BD and at least annually thereafter.

(iii) The training program shall be conducted in a manner that the employee is able to understand. The employer shall assure that each employee is informed of the following:

(A) The health hazards associated with BD exposure, with special attention to the information incorporated in Appendix A;

(B) The quantity, location, manner of use, release, and storage of BD and the specific nature of operations that could result in exposure to BD, especially exposures above the PEL or STEL;

(C) The engineering controls and work practices associated with the employee's job assignment;

(D) The measures employees can take to protect themselves from exposure to BD, including a review of their habits, such as smoking and personal hygiene; and specific procedures the employer has implemented to protect employees from exposure to BD, such as appropriate work practices, emergency procedures, and personal protective equipment;

(E) The details of the hazard communication program developed by the employer, including an explanation of the signs, labeling system and material safety data sheets, and how employees can obtain and use the appropriate hazard information;

(F) The purpose, proper selection, fitting, proper use, and limitations of respirators and protective clothing;

(G) The purpose and a description of the medical surveillance program required by paragraph (i) of this section;

(H) The contents of this standard and its appendices; and

(I) The right of any employee exposed to BD at or above the action level or above the STEL to obtain:

(1) medical examinations as required by paragraph (1) at no cost to the employee;

(2) the employee's medical records required to be maintained by paragraph (k)(3) of this section; and

(3) all air monitoring results representing the employee's exposure to BD and required to be kept by paragraph (k)(2) of this section.

(iv) Access to information and training materials.

(A) The employer shall make a copy of this standard and its appendices readily available without cost to all affected employees and shall provide a copy if requested.

(B) The employer shall provide to the Assistant Secretary or the Director, upon request, all materials relating to the employee information and the training program.

(k) *Recordkeeping—(1) Objective data for exempted operations.* (1) Where the processing, use, or handling of products made from or containing BD are exempted from other requirements of this section under paragraph (a)(2) of this section, or where objective data have been relied on in lieu of initial monitoring under paragraph (d)(2)(ii) of this section, the employer shall establish

and maintain an accurate record of objective data reasonably relied upon in support of the exemption.

(ii) This record shall include at least the following information:

- (A) The product qualifying for exemption;
- (B) The source of the objective data;
- (C) The testing protocol, results of testing, and/or analysis of the material for the release of BD;

(D) A description of the operation exempted and how the data support the exemption; and

(E) Other data relevant to the operations, materials, processing, or employee exposures covered by the exemption.

(iii) The employer shall maintain this record for the duration of the employer's reliance upon such objective data.

(2) *Exposure measurements.* (i) The employer shall keep an accurate record of all measurements taken to monitor employee exposure to BD as prescribed in paragraph (d) of this section.

(ii) The record shall include at least the following information:

- (A) The date of measurement;
- (B) The operation involving exposure to BD which is being monitored;
- (C) Sampling and analytical methods used and evidence of their accuracy;
- (D) Number, duration, and results of samples taken;
- (E) Type of protective devices worn, if any; and

(F) Name, social security number and exposure of the employees whose exposures are represented.

(iii) The employer shall maintain this record for at least thirty (30) years, in accordance with 29 CFR 1910.20.

(3) *Medical surveillance.* (i) The employer shall establish and maintain an accurate record for each employee subject to medical surveillance by paragraph (i)(1)(i) of this section, in accordance with 29 CFR 1910.20.

(ii) The record shall include at least the following information:

- (A) The name and social security number of the employee;
- (B) Physicians' written opinions;
- (C) Any employee medical complaints related to exposure to BD; and
- (D) A copy of the information provided to the physician as required by paragraphs (i)(6) (ii) through (v) of this section.

(iii) The employer shall ensure that this record is maintained for the duration of employment plus thirty (30) years, in accordance with 29 CFR 1910.20.

(4) *Availability.* (i) The employer, upon written request, shall make all records required to be maintained by this section available for examination

and copying to the Assistant Secretary and the Director.

(ii) The employer, upon request, shall make an exemption and exposure records required by paragraphs (k)(1) and (k)(2) of this section available for examination and copying to affected employees, former employees, designated representatives and the Assistant Secretary, in accordance with 29 CFR 1910.20(a)-(e) and (g)-(i).

(iii) The employer, upon request, shall make employee medical records required by paragraph (k)(3) of this section available for examination and copying to the subject employee, anyone having the specific written consent of the subject employee, and the Assistant Secretary, in accordance with 29 CFR 1910.20.

(5) *Transfer of records.* (i) The employer shall comply with the requirements concerning transfer of records set forth in 29 CFR 1910.20(h).

(ii) Whenever the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify the Director at least 90 days prior to disposal and transmit them to the Director.

(l) *Observation of monitoring—(1) Employee observation.* The employer shall provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to BD conducted in accordance with paragraph (d) of this section.

(2) *Observation procedures.* When observation of the monitoring of employee exposure to BD requires entry into an area where the use of protective clothing or equipment is required, the observer shall be provided with and be required to use such clothing and equipment and shall comply with all other applicable safety and health procedures.

(m) *Dates—(1) Effective date.* This section shall become effective sixty (60) days after the date of publishing the final standard in the Federal Register.

(2) *Start-up dates.* (i) The requirements of paragraphs (c) through (l) of this section, including feasible work practice controls but not including engineering controls specified in paragraph (f)(1), shall be complied with within one-hundred and eighty (180) days after the effective date of this section.

(ii) Engineering controls specified by paragraph (f)(1) of this section shall be implemented within one (1) year after the effective date of this section.

(n) *Appendices.* The information contained in the appendices is not intended, by itself to, create any

additional obligations not otherwise imposed or to detract from any existing obligation. The protocols on respiratory fit testing in Appendix E are mandatory.

Appendix A to § 1910.1051: Substance Safety Data Sheet for 1,3-Butadiene

I. Substance Identification

A. Substance: 1,3-Butadiene
(CH₂=CH-CH=CH₂).

B. Synonyms: 1,3-Butadiene; butadiene; biethylene; bi-vinyl; divinyl; butadiene-1,3; buta-1,3-diene; erythrene; NCI-C50602; CAS-106-99-0.

C. BD can be found as a gas or liquid.

D. BD is used in production of styrene-butadiene rubber and polybutadiene rubber for the tire industry. Other uses include copolymer latexes for carpet backing and paper coating, as well as resins and polymers for pipes and automobile and appliance parts. It is also used as an intermediate in the production of such chemicals as fungicides.

E. Appearance and odor: BD is a colorless, non-corrosive, flammable gas at standard ambient temperature and pressure with a mild aromatic odor.

F. Permissible exposure: Exposure may not exceed 2 part BD per million parts of air average over the 8-hour work day, nor may short-term exposure exceed 10 parts of BD per million parts of air averaged over a 15-minute period.

II. Health Hazard Data

A. BD can affect the body if it is inhaled or if the liquid comes in contact with the eyes or skin.

B. Effect of overexposure: Overexposure to BD may cause irritation of the eye, nose, and throat. It may also cause drowsiness and lightheadness. Exposure to very high concentrations may cause unconsciousness and death. Spilled on the skin, it may cause frostbite and irritation.

C. Long-term (chronic) exposure: BD has been shown to cause cancer in two animal studies. BD was found to be a weak carcinogen for Sprague-Dawley rats and to be a potent carcinogen-neoplastic lesions at multiple target sites in B63F1 mice. Among six epidemiologic studies, four studies reported increases in mortality from cancer of lymphopoietic system and these studies reported increases in mortality from leukemia. Two studies indicated significantly elevated mortality from stomach neoplasms.

D. Reporting signs and symptoms: You should inform your employer if you develop any signs or symptoms and suspect that they are caused by exposure to BD.

III. Emergency First Aid Procedures

In the event of emergency, institute first aid procedures and send for first aid or medical assistance.

A. Eye and Skin Exposures: If there is a potential that pressurized liquid BD can come in contact with eye or skin, face shields and skin protective equipment must be provided and used. If liquid BD comes in contact with eye, get medical attention. Contact lenses should not be worn when working with this chemical.

B. Breathing: If a person breathes in large amounts of BD, move the exposed person to fresh air at once. If breathing has stopped, perform artificial respiration. Keep the affected person warm and at rest. Get medical attention as soon as possible.

C. Rescue: Move the affected person from the hazardous exposure. If the exposed person has been overcome, notify someone else and put into effect the established emergency rescue procedures. Do not become a casualty. Understand the facility's emergency rescue procedures and know the locations of rescue equipment before the need arises.

IV. Respirators and Protective Clothing

A. Respirators. Good industrial hygiene practices recommend that engineering controls be used to reduce environmental concentrations to the permissible exposure level. However, there are some exceptions where respirators may be used to control exposure. Respirators may be used when engineering and work practice controls are not technically feasible, when such controls are in the process of being installed, or when these controls fail and need to be supplemental. Respirators may also be used for operations which require entry into tanks or closed vessels, and in emergency situations. If the use of respirators is necessary, the only respirators permitted are those that have been approved by the Mine Safety and Health Administration (MSHA) or the National Institute for Occupational Safety and Health (NIOSH). In addition to respirator selections, a complete respiratory protection program should be instituted which includes regular training, maintenance, inspection, cleaning, and evaluation. If you can smell BD while wearing a respirator, proceed immediately to fresh air. If you experience difficulty in breathing while wearing a respirator, tell your employer.

B. Protective Clothing. Employees should be provided with and required to use impervious clothing, gloves, face shields (eight-inch minimum), and other appropriate protective clothing necessary to prevent the skin from becoming frozen by contacting with liquid BD or by contacting with vessel containing liquid BD. Any clothing which becomes wet with liquid BD should be removed immediately and not reworn until the BD has evaporated.

Employees should be provided with and required to use splash-proof safety goggles where liquid BD may contact the eyes.

V. Precautions for Safe Use, Handling, and Storage.

A. Fire and Explosion Hazards. BD is a flammable gas and can easily form explosive mixtures in air. It has a lower explosive limit of 2%, and an upper explosive limit of 11.5%. It has an ignition temperature of 804-F. It is heavier than air (vapor density, 1.9) and may travel a considerable distance to a source of ignition and flash back. Usually it contains inhibitors to prevent self-polymerization (which is accompanied by evolution of heat) and to prevent formation of peroxides. At elevated temperatures, such as in fire conditions, polymerization may take place. If the polymerization takes place in a container,

there is a possibility of violent rupture of the container.

B. Life Hazard. Slightly toxic but may cause asphyxiation by exclusion of oxygen. Slight respiratory irritant. Direct expansion on skin may cause freeze burns.

C. Storage. Protect against physical damage. Outside or detached storage is preferred. Inside storage should be in a cool, well-ventilated, noncombustible location, away from all possible sources of ignition. Store cylinders vertically and do not stack. Do not store with oxidizing material.

D. Usual Shipping Containers. Liquefied in steel pressure apparatus.

E. Electrical Equipment. Electrical installations in Class I hazardous locations, as defined in Article 500 of the National Electrical Code, should be in accordance with Article 501 of the Code. If explosion-proof electrical equipment is necessary, it shall be suitable for use in Group B. Group D equipment may be used if such equipment is isolated in accordance with Section 501-5(a) by sealing all conduit 1/2 inch size or larger. See Explosion Venting Guide (NFPA No. 68), National Electrical Code (NFPA No. 70), State Electricity (NFPA No. 77), Lightning Protection Code (NFPA No. 78), Fire-Hazard Properties of Flammable Liquids, Gases and Volatile Solids (NFPA No. 325M), and Chemical Safety Data Sheet SD-55 (Manufacturing Chemists' Association, Inc.).

F. Fire Fighting. Stop flow of gas. Use water to keep fire-exposed containers cool. BD vapors are uninhibited and may from polymers in vents or flame arrester of storage tanks, resulting in stopping of vents. Fire extinguishers and quick drenching facilities must be readily available, and you should know where they are and how to operate them.

G. Spill and Leak. Persons not wearing protective equipment and clothing should be restricted from areas of spills or leaks until cleanup has been completed. If BD is spilled or leaked, the following steps should be taken:

1. Remove all ignition sources.
2. Ventilate area of spill or leak.
3. If in liquid form, for small quantities, absorb on paper towels. Evaporate in a safe place (such as a fume hood). Allow sufficient time for evaporating vapors to completely clear the hood ductwork. Burn the paper in a suitable location away from combustible materials. Large quantities can be collected and atomized in a suitable combustion chamber.
4. If in gaseous form, stop flow of gas. If source of leak is a cylinder and the leak cannot be stopped in place, remove the leaking cylinder to a safe place in the open air and repair the leak or allow the cylinder to empty.

H. Methods of Waste Disposal.

1. If in liquid form, by atomizing in a suitable combustion chamber.
2. If in gaseous form, by burning in a safe location or in a suitable combustion chamber.
 1. You must not keep food, beverage, or smoking materials, nor are you permitted to eat or smoke in regulated areas where BD concentrations are above the permissible exposure limits.

J. Ask your supervisor where BD is used in your work area and for any additional plant safety and health rules.

VI. Medical Requirements.

Your employer is required to offer you the opportunity to participate in a medical surveillance program if you are exposed to BD at concentrations exceeding the action level for more than 30 days a year or at concentrations exceeding the PELs for more than 10 days a year. If you are exposed to BD at concentrations over either of the PELs for more than 10 days a year, the medical surveillance will also include tests to ensure that you are able to wear the respirator that you are assigned. Your employer must provide all medical examinations relating to your BD exposure at a reasonable time and place and at no cost to you.

VII. Observation of Monitoring

Your employer is required to perform measurements that are representative of your exposure to BD and you or your designated representative are entitled to observe the monitoring procedure. You are entitled to observe the steps taken in the measurement procedure, and to record the results obtained. When the monitoring procedure is taking place in an area where respirators or personal protective clothing and equipment are required to be worn, you or your representative must also be provided with, and must wear protective clothing and equipment.

VIII. Access To Information

A. Each year, your employer is required to inform you of the information contained in this appendix. In addition, your employer must instruct you in the proper work practices for using BD, emergency procedures, and the correct use of protective equipment.

B. Your employer is required to determine whether you are being exposed to BD. You or your representative has the right to observe employee measurements and to record the results obtained. Your employer is required to inform you of your exposure. If your employer determines that you are being overexposed, he or she is required to inform you of the actions which are being taken to reduce your exposure to within permissible exposure limits.

C. Your employer is required to keep records of your exposures and medical examinations. These records must be kept by the employer for at least thirty (30) years.

D. Your employer is required to release your exposure and medical records to you or your representative upon your request.

Appendix B to § 1910.1051: Substance Technical Guidelines for 1,3-Butadiene

I. Physical and Chemical Data

A. Substance identification:

1. Synonyms: 1,3-Butadiene; butadiene; biethylene; bivenyl; divinyl; butadiene-1,3; buta-1,3 diene; erythrene; NCI-C50620; CAS-106-99-0
2. Formula: $\text{CH}_2=\text{CH}-\text{CH}=\text{CH}_2$
3. Molecular weight: 54.1

B. Physical data:

1. Boiling point (760 mm Hg.): -4.7°C (23.5°F).
2. Specific gravity (water=1): 0.62
3. Vapor density (air=1 at boiling points): 1.87
4. Vapor pressure at 20°C (68°F): 910 mm Hg
5. Solubility in water, g/100 g water at 20°C (68°F): 0.05.
6. Appearance and odor: colorless gas above boiling point with a mildly aromatic odor. Below boiling point, BD is a colorless liquid with a mildly aromatic odor.

II. Fire, Explosion and Reactivity Hazard Data

- A. Fire. 1. Flash point: Not applicable (considered a gas for fire purpose).
2. Stability.
3. Flammable limits in air, percent by volume: Lower: 2.0; Upper: 11.5.
4. Extinguishing media: Carbon dioxide for small fires, polymer or alcohol foams for large fires.
5. Special fire fighting procedures: Dilution with 23 volumes of water renders it non-flammable.
6. Unusual fire and explosion hazards: Vapors of BD will burn without the presence of air or other oxidizers. BD vapors are heavier than air and may travel along the ground and be ignited by open flames or sparks at locations remote from the site at which BD is being used.
7. For purposes of compliance with the requirements of 29 CFR 1910.106, BD is classified as a flammable gas. For example, 7,500 ppm, approximately one-fourth of the lower flammable limit, would be considered to pose a potential fire and explosion hazard.
8. For purposes of compliance with 29 CFR 1910.155, BD is classified as a Class B fire hazard.
9. For purposes of compliance with 29 CFR 1910.307, locations classified as hazardous due to the presence of BD shall be Class I.
- B. Reactivity. 1. Conditions contributing to instability: Heat. Peroxides are formed when inhibitor concentration is not maintained at proper level. At elevated temperatures, such as in fire conditions, polymerization may take place.
2. Incompatibilities: Contact with strong oxidizing agents may cause fires and explosions. Contact with copper and copper alloys may cause formations of explosive copper compounds.
3. Hazardous decomposition products: Toxic gases and vapors (such as carbon monoxide) may be released in a fire involving BD.
4. Special precautions: BD will attack some forms of plastics, rubber, and coatings. BD in storage should be checked for proper inhibitor content, for self-polymerization, and for formation of peroxides when in contact with air and iron. Piping carrying BD may become plugged by formation of rubbery polymer.
- C. Warning Properties. 1. Odor Threshold: An odor threshold of 0.16 ppm was reported.
2. Eye Irritation Level: Grant states that "allegedly workmen exposed to vapors of BD (concentration or purity unspecified) have complained of irritation of eyes, nasal passages, throat, and lungs. However, a precise quantitative study has shown that

even a concentration of 8000 ppm in air produces no symptoms in human beings. Dogs and rabbits exposed experimentally to as much as 6700 ppm 7½ hours a day for 8 months have developed no histologically demonstrable abnormality in any part of the eyes."

3. Evaluation of Warning Properties: Since the odor threshold of BD is well below the permissible exposure limit, it is treated as a material with good warning properties.

III. Spill, Leak, and Disposal Procedures

A. Persons not wearing protective equipment and clothing should be restricted from areas of spills or leaks until cleanup has been completed. If BD is spilled or leaked, the following steps should be taken:

1. Remove all ignition sources.
2. Ventilate areas of spill or leak.
3. In case of liquids containing BD, spills of small quantities can be absorbed on paper towels. Evaporate in a safe place (such as fume hood). Allow sufficient time for evaporating vapors to completely clear the hood ductwork. Burn the paper in a suitable location away from combustible materials. Large quantities can be collected and atomized in a suitable combustion chamber.
4. If in gaseous form, stop flow of gas. If source of leak is a cylinder and the leak cannot be stopped in place, remove the leaking cylinder to a safe place in the open air and repair the leak or allow the cylinder to empty.

B. BD may be disposed of:

1. If in liquid form, by atomizing in a suitable combustion chamber.
2. If in gaseous form, by burning in a safe location or in a suitable combustion chamber.

IV. Monitoring and Measurement Procedures

A. Exposure above the Permissible Exposure Limit

1. Eight-hour exposure evaluation. Measurements taken for the purpose of determining employee exposure under this section are best taken with consecutive samples covering the full shift. Air samples must be taken in the employee's breathing zone (air that would most nearly represent that inhaled by the employee).
2. Monitoring techniques. The sampling and analysis under this section may be performed by collection of the BD vapor on charcoal adsorption tubes or other composition adsorption tubes, with subsequent chemical analysis. Sampling and analysis may also be performed by instruments such as real-time continuous monitoring systems, portable direct reading instruments, or passive dosimeters as long as measurements taken using these methods accurately evaluate the concentration of BD in employees breathing zones.

Appendix D describes the validated method of sampling and analysis which has been tested by OSHA for use with BD. The employer has the obligation of selecting a monitoring method which meets the accuracy and precision requirements of the standard under his unique field conditions. The standard requires that the method of monitoring must be accurate, to a 95 percent confidence level, to plus or minus 25 percent for concentrations of BD at or above 2 ppm,

and to plus or minus 35 percent for concentrations below 2 ppm. In addition to the method described in appendix D, there are numerous other methods available for monitoring for BD in the workplace. Details on these other methods have been submitted by various companies to the rulemaking record, and are available at the OSHA Docket Office.

B. Since many of the duties relating to employee exposure are dependent on the results of measurement procedures, employers must assure that the evaluation of employee exposure is performed by a technically qualified person.

V. Personal Protective Equipment

A. Employees should be provided with and required to use impervious clothing, gloves, face shields (eight-inch minimum), and other appropriate protective clothing necessary to prevent the skin from becoming frozen by contacting with liquid BD or vessels containing liquid BD.

B. Any clothing which becomes wet with liquid BD should be removed immediately and not reworn until the butadiene has evaporated.

C. Employees should be provided with and required to use splashproof safety goggles where liquid BD may contact the eyes.

VI. Housekeeping and Hygiene Facilities

For purposes of complying with 29 CFR 1910.141, the following items should be emphasized:

A. The workplace should be kept clean, orderly, and in a sanitary condition. The employer is required to institute a leak and spill detection program for operations involving liquid BD in order to detect sources of fugitive BD emissions.

B. Adequate washing facilities with hot and cold water are to be provided, and maintained in a sanitary condition. Suitable cleansing agents are also to be provided to assure the effective removal of BD from the skin.

C. Change or dressing room with individual clothes storage facilities must be provided to prevent the contamination of street clothes with BD. Because of the hazardous nature of BD, contaminated protective clothing should be placed in a regulated area designated by the employer for removal of BD before the clothing is laundered or disposed of.

VII. Miscellaneous Precautions

A. Store BD in tightly closed container in a cool, well-ventilated area and take all necessary precautions to avoid any explosion hazard.

B. Non-sparking tools must be used to open and close metal containers. These containers must be effectively grounded and bonded.

C. Do not incinerate BD cartridges, tanks or other containers.

D. Employers shall advise employees of all areas and operations where exposure to BD occur.

VIII. Common Operations and Controls

The following list includes some common operations in which exposure to BD may occur and control methods which may be effective in each case:

Operations	Controls
Liberation of BD during molding and vulcanizing operations in the processing of rubber products from styrene-butadiene (SBR) elastomer and polybutadiene elastomer into rubber products; manufacture of high-impact polystyrene containing SBR/polybutadiene elastomer and manufacture of SBR foams; processing into products of ABS resins and styrene-butadiene copolymer resins; processing of neoprene elastomers into rubber products; processing of nitrile elastomer into nitrile latexes and rubbers; processing of nitrile elastomer and PVC-nitrile polyblends into rubber products and calendered plastic products.	General dilution ventilation; local exhaust ventilation.
Use in manufacture of SBR elastomer, polybutadiene elastomer, neoprene elastomer, nitrile elastomer, and SB copolymer and ABS resins.	General dilution; local exhaust ventilation; personal protective equipment.
Use in manufacture of adiponitrile, cycloolefins, 1,4-hexadiene tetramethylene-sulfone, and tetrahydro-phthalic anhydride.	General dilution; local exhaust ventilation; personal protective equipment.

Appendix C to § 1910.1051: Medical Surveillance for 1,3-Butadiene

I. Route of Entry

Inhalation.

II. Toxicology

Inhalation of BD has been linked to an increased risk of cancer, damage to the reproductive organs, and fetotoxicity. Butadiene can be converted via oxidation to epoxymutene and diepoxymutene, two genotoxic metabolites that may play a role in the expression of BD's toxic effects.

BD has been tested for carcinogenicity in mice and rats. Both species responded to BD exposure by developing cancer at multiple primary organ sites. Early deaths in mice were caused by malignant lymphomas, primarily lymphocytic originating in the thymus. Epidemiologic evidence in synthetic rubber workers suggests that BD exposure may be associated with an increased risk of lymphomas and leukemias in humans.

Mice exposed to BD at concentrations of 20 ppm or greater developed ovarian or testicular atrophy. Sperm head morphology tests also revealed abnormal sperm in mice exposed to BD; lethal mutations were found in a dominant lethal test. Evidence of teratogenicity was observed in the offspring of female rats exposed to BD. In light of these results in animals, the possibility that BD may adversely affect the reproductive systems of male and female workers must be considered.

Anemia has been observed in animals exposed to butadiene. In some cases, this anemia appeared to be a primary response to exposure; in other cases, it may have been secondary to a neoplastic response. Mild

alterations of hematologic parameters have also been observed in synthetic rubber workers exposed to BD.

III. Medical Signs and Symptoms of Acute Exposure

Skin contact with liquified BD causes characteristic burns or frostbite.

At very high concentrations in air, BD is an anesthetic, causing narcosis, respiratory paralysis, unconsciousness, and death. Such concentrations are unlikely, however, except in an extreme emergency because BD poses an explosion hazard at these levels.

At lower air concentrations, BD can irritate the eyes, nasal passages, throat, and lungs. Blurred vision, coughing, and drowsiness may also occur. Effects are mild at 2,000 ppm and pronounced at 8,000 ppm for exposures occurring over the full workshift.

IV. Surveillance and Preventative Consideration

As described above, the principal effects of concern are BD-induced lymphoma, leukemia and reproductive toxicity. Anemia and other changes in the peripheral blood cells may be indicators of excessive exposure to BD.

The proposed medical surveillance program is designed to observe exposed workers on a regular basis. The reporting of symptoms characteristic of lymphoma and the results of a physical examination directed at detection of lymph node enlargement would provide the best opportunity to detect lymphoma at an early stage. A medical surveillance program for detection of bone marrow toxicity would focus on the regular screening of blood indices to detect pathological changes in the hematopoietic system.

Since the potential reproductive effects of BD are not of concern to all workers exposed to this toxic gas, the proposed medical surveillance program would focus consultations and examinations relating to developmental toxicity and reproductive capacity on those workers who have a need to receive such information and testing.

A. Medical and Occupational History

The medical and occupational history would play a prominent role in identification of workers at greatest risk of developing neoplasia or reproductive effects from their exposures to BD.

The most important goal of the proposed medical history would be to elicit information from the worker regarding potential signs or symptoms generally related to the relevant neoplasias, such as non-Hodgkins lymphoma. Physicians should be aware of the presenting symptoms and signs of reticuloendothelial and hematopoietic neoplasia and the procedures necessary to confirm or exclude such a diagnosis.

Workers with a history of reproductive difficulties or a personal or family history of immune deficiency syndromes, blood dyscrasias, lymphoma, or leukemia, and those who are or have been exposed to medicinal drugs or chemicals known to affect the hematopoietic or lymphatic systems may be at higher risk from their exposure to BD.

To assure that subtle changes are identified, the physician would update and review the medical and occupational history

of patients exposed to BD each subsequent time an examination or consultation is conducted.

B. Physical Examination

Medical surveillance conducted by a licensed physician would indicate if a worker has blood changes indicative of otherwise unsuspected overexposure to BD or an early stage of leukemia or non-Hodgkins lymphoma. Although neither reticuloendothelial or hematopoietic neoplasia is proven to be induced by BD, sufficient experimental data in animals and suggestive epidemiological data exist to warrant a careful and constant medical surveillance program to anticipate and, if possible, reverse such adverse effects of BD exposure if they occur.

Because of the importance of lung function to workers required to wear respirators to protect themselves from BD exposure, these workers would receive an assessment for pulmonary function before they begin to wear a respirator and at least every three years thereafter. Pulmonary function testing would be conducted by a licensed physician experienced in pulmonary function tests or by persons who have completed a training course in spirometry sponsored by an appropriate governmental, academic, or professional institution to assure reproducibility of results. (Such training is available through the National Institute for Occupational Safety and Health (NIOSH).) Pulmonary function tests conducted would have to be adequate to determine the employee's ability to wear a respirator, and decisions based on these tests should follow established medical criteria for evaluation of pulmonary function.

C. Additional Examinations and Referrals

1. *Examination by a Specialist.* When a worker presents unexplained symptoms or signs in the physical examination or in the laboratory tests, follow-up medical surveillance would be necessary to assure that BD exposure is not adversely affecting the worker's health. Additional tests should be undertaken to determine the nature of the medical problem and the underlying cause. Where relevant, the worker would be sent to a specialist for further testing and treatment as necessary.

2. *Emergencies.* The examination of workers exposed to BD in an emergency would be directed at the organ systems most likely to be affected. If the worker has received a severe acute exposure, hospitalization may be required to assure proper medical intervention. It is not possible to define "severe," but the physician's judgment should not merely rest on hospitalization. If the worker has suffered significant conjunctival, oral, or nasal irritation, respiratory distress, or discomfort, the physician should instigate appropriate followup procedures. These include attention to the eyes, the neurological system, and because such individuals may have been placed at greater risk to blood dyscrasias, follow-up examinations of the peripheral blood. An immediate complete blood count should be followed by a similar examination at three, six, and twelve months following the

emergency exposure. This testing would permit the early identification essential to proper medical management of such workers.

3. *Consultations and examinations relating to reproductive toxicity.* The responsible physician would have to be alerted to the needs of workers who are concerned about the possibility that their BD exposure may be affecting their ability to procreate a healthy child. For workers with high exposures to BD, especially those who have experienced difficulties in conceiving, miscarriages, or stillbirths, appropriate medical and laboratory evaluation of fertility may be necessary to determine if BD is having any adverse effect on the reproductive system or on the health of the fetus. In such cases these medical or clinical tests would be identified by the examining physician and conducted accordingly.

D. *Additional Examinations or Tests.* The physician may deem it necessary to perform other medical examinations or tests as indicated. The proposal provides a mechanism whereby these additional investigations would be covered under the standard for occupational exposure to BD, and it also permits physicians to add appropriate or necessary tests to improve the diagnosis of disease should such tests become available in the future.

E. *Employer Obligations:* The employer would be required to provide the responsible physician and any specialists involved in a diagnosis with the following information: A copy of the BD Standard including relevant appendices; a description of the affected employee's duties as they relate to his or her exposure to BD; an estimate of the employee's exposure including duration (e.g. 15 hr/wk, three 8-hour shifts, full time); a description of any personal protective equipment, including respirators used by the employee; and the results of any previous medical determinations for the affected employee related to BD exposure to the extent that this information is within the employer's control.

F. *Physician's Obligations.* The standard would require the employer to obtain a written statement from the physician. This statement would have to contain the physician's opinion, based on a written evaluation of test results and the physical examination, as to whether the employee has any medical condition placing him or her at increased risk of impaired health from exposure to BD or use of respirators, as appropriate. The physician would also have to state his or her opinion regarding any restrictions that should be placed on the employee's exposure to BD or upon the use of protective clothing or equipment such as respirators. If the employee wears a respirator as a result of his or her exposure to BD, the physician's opinion would have to also contain a statement regarding the suitability of the employee to wear the type of respirator assigned. Finally, the physician would have to inform the employer that the employee has been told the results of the medical examination and of any medical conditions which require further explanation or treatment. This written opinion is not to contain any information on specific findings or diagnoses unrelated to occupational exposure.

The purpose in requiring the examining physician to supply the employer with a written opinion is to provide the employer with a medical basis to assist the employer in placing employees initially, in assuring that their health is not being impaired by BD, and to assess the employee's ability to use any required protective equipment.

Appendix D to § 1910.1051: Sampling and Analytical Method for 1, 3-Butadiene

Methods for 1, 3 Butadiene

A number of methods are available for monitoring employee exposures to BD. Most of these involve the use of charcoal tubes and sampling pumps, followed by analysis of the samples by gas chromatography. The essential differences between the charcoal tube methods include, among others, the use of different desorbing solvents, the use of different lots of charcoal, and the use of different equipment for analysis of the samples.

Besides charcoal, methods using passive dosimeters, gas sampling bags, impingers and detector tubes have been utilized for determination of BD exposure. In addition, there are several commercially available portable gas analyzers and monitoring units.

This appendix contains details for the method which has been tested at the OSHA Analytical Laboratory in Salt Lake City. Inclusion of this method in the appendix does not mean that this method is the only one which will be satisfactory. Copies of descriptions of other methods are available in the rulemaking record, and may be obtained from the OSHA Docket Office. These include the Union Carbide, Dow Chemical, 3M, and Dupont methods, as well as NIOSH Method S-91.

Employers who note problems with sample breakthrough using the OSHA or other charcoal methods should try larger charcoal tubes. Tubes of larger capacity are available. In addition, lower flow rates and shorter sampling times should be beneficial in minimizing breakthrough problems. Whatever method the employer chooses, he must assure himself of the method's accuracy and precision under the unique conditions present in his workplace.

1, 3-Butadiene

Method No.: 56.

Matrix: Air.

Target concentration: 1 ppm (2.21 mg/m³).

Procedure: Air samples are collected by drawing known volumes of air through sampling tubes containing charcoal adsorbent which has been coated with 4-tert-butylcatechol. The samples are desorbed with carbon disulfide and then analyzed by gas chromatography using a flame ionization detector.

Recommended sampling rate and air volume: 0.05 L/min and 3 L.

Detection limit of the overall procedure: 90 ppb (200 ug/m³) (based on 3 L air volume).

Reliable quantitation limit: 155 ppb (343 ug/m³) (based on 3 L air volume).

Standard error of estimate at the target concentration: 6.5% (Section 4.6.1).

Special requirements: The sampling tubes must be obtained coated with 4-tert-

butylcatechol. Collected samples should be stored in a freezer.

Status of method: A sampling and analytical method that has been subjected to the established evaluation procedures of the Organic Methods Evaluation Branch.

Date: December, 1985.

Chemist: Warren Hendricks.

Organic Methods Evaluation Branch OSHA Analytical Laboratory Salt Lake City, Utah

1. General Discussion

1.1 Background.

1.1.1 History. This work was undertaken to develop a sampling and analytical procedure for 1,3-butadiene at 1 ppm. The 1 ppm target concentration was selected in anticipation of a possible reduction in the current OSHA PEL of 1000 ppm. NIOSH has recently recommended that 1,3-butadiene be treated as a potential occupational carcinogen, teratogen and as a reproduction hazard. (Ref. 5.1)

The current method recommended by OSHA for collecting 1,3-butadiene uses activated coconut shell charcoal as the sampling medium (Ref. 5.2). This method was found to be inadequate for use at low 1,3-butadiene levels because of sample instability (Sections 4.5.2 and 4.6.2).

The stability of samples has been significantly improved through the use of a specially cleaned charcoal which is coated with 4-tert-butylcatechol (TBC). TBC is a polymerization inhibitor for 1,3-butadiene (Ref. 5.3).

1.1.2. Toxic effects (This section is for information only and should not be taken as the basis of OSHA policy). Symptoms of human exposure to 1,3-butadiene include irritation of the eyes, nose and throat. It can also cause coughing, drowsiness and fatigue. Dermatitis and frostbite can result from skin exposure to liquid 1,3-butadiene. (Ref. 5.1)

NIOSH recommends that 1,3-butadiene be handled in the workplace as a potential occupational carcinogen. This recommendation is based on two inhalation studies that resulted in cancers at multiple sites in rats and in mice. 1,3-butadiene has also demonstrated mutagenic activity in the presence of a liver microsomal activating system. It has also been reported to have adverse teratogenic and reproductive effects. (Ref. 5.1)

1.1.3 Potential workplace exposure. In 1984, 2.53 billion pounds of rubber grade butadiene were produced. This amount was only 3.7% less than the average yearly amount produced during the past decade of 1974-1984. In 1984, butadiene ranked 36th of the top 50 chemicals produced in the U.S. (Ref. 5.4) About 80% of the 1,3-butadiene produced in the United States is a by-product of the manufacture of ethylene. The remaining 20% is produced by the dehydrogenation of n-butene and n-butane. (Ref. 5.1)

About 90% of the annual production of 1,3-butadiene is used to manufacture styrene-butadiene rubber and polybutadiene rubber. Other uses include: polychloroprene rubber, acrylonitrile butadiene-styrene resins, nylon intermediates, styrene-butadiene latexes, butadiene polymers, thermoplastic

elastomers, nitrile resins, methyl methacrylate-butadiene styrene resins and chemical intermediates. (Ref. 5.1)

A NIOSH survey, that was conducted from 1972 to 1974, estimated that approximately 65,000 workers were potentially exposed to 1,3-butadiene. About 70% of this total was employed in chemical and chemical products occupations. Another 25% of the total was employed in workplaces which included: rubber and rubber products industries, miscellaneous business services and miscellaneous manufacturing industries. (Ref. 5.1)

1.1.4 Physical properties (Ref. 5.1).

CAS No.: 106-99-0.

Molecular weight: 54.1.

Appearance: Colorless gas.

Boiling point: -4.41 °C (760 mm Hg).

Freezing point: -108.9 °C.

Vapor pressure: 2 atm @ 15.3 °C; 5 atm @ 47 °C.

Explosive limits: 2 to 11.5% (by volume) (in air)

Odor threshold: 1.3 ppm.

Structural formula: $H_2C:CHCH:CH_2$

Synonyms: biethylene; binylin; butadiene; divinyl; buta-1,3-diene;

alpha-gama-butadiene; erythrene; NCI-C50602; pyrrolylene; vinylethylene.

1.2 Limit defining parameters.

The analyte air concentrations listed throughout this method are based on an air volume of 3 L and a desorption volume of 1 mL. Air concentrations listed in ppm are referenced to 25 °C and 760 mm Hg.

1.2.1 Detection limit of the analytical procedure. The detection limit of the analytical procedure was 304 pg per injection. This was the amount of 1,3-butadiene which gave a measurable response relative to the interferences present in a standard. (section 4.1)

1.2.2 Detection limit of the overall procedure. The detection limit of the overall procedure was 0.60 ug per sample (90 ppb or 200 ug/m³). This amount was determined graphically. It was the amount of analyte which, when spiked on the sampling device, would allow recovery approximately equal to the detection limit of the analytical procedure. (section 4.1.2)

1.2.3 Reliable quantitation limit. The reliable quantitation limit was 1.03 ug per sample (155 ppb or 343 ug/m³). This was the smallest amount of analyte which could be quantitated within the limits of a recovery of at least 75% and a precision (± 1.96 SD) of $\pm 25\%$ or better. (section 4.2)

The reliable quantitation limit and detection limits reported in the method are based upon optimization of the instrument for the smallest possible amount of analyte. When the target concentration of an analyte is exceptionally higher than these limits, they may not be attainable at the routine operation parameters.

1.2.4 Sensitivity. The sensitivity of the analytical procedure over a concentration range representing 0.6 to 2 times the target concentration, based on the recommended air volume, was 387 area units per ug/mL. This value was determined from the slope of the calibration curve. (section 4.3) The sensitivity may vary with the particular instrument used in the analysis.

1.2.5 Recovery. The recovery of 1,3-Butadiene from samples used in storage tests remained above 77% when the samples were stored at ambient temperature and above 94% when the samples were stored at refrigerated temperature. These values were determined from regression lines which were calculated from the storage data. (section 4.6) The recovery of the analyte from the collection device must be at least 75% following storage.

1.2.6 Precision (analytical method only). The pooled coefficient of variation obtained from replicate determinations of analytical standards over the range of 0.6 to 2 times the target concentration was 0.011. (section 4.3)

1.2.7 Precision (overall procedure). The precision at the 95% confidence level for the refrigerated temperature storage test was $\pm 12.7\%$. (section 4.6.1) This value includes an additional $\pm 5\%$ for sampling error. The overall procedure must provide results at the target concentrations that are $\pm 25\%$ at the 95% confidence level.

1.2.8 Reproducibility. Samples collected from a controlled test atmosphere and a draft copy of this procedure were given to a chemist unassociated with this evaluation. The average recovery was 97.2% and the standard deviation was 6.2%. (section 4.7)

1.3 Advantages

1.3.1 The sampling and analytical procedure permits determination of 1,3-butadiene at low-levels.

1.3.2 Samples are relatively stable following storage for at least 17 days.

1.4 Disadvantage

The recommended sampling tubes must be obtained from the Salt Lake City Analytical Laboratory.

2. Sampling procedure

2.1 Apparatus

2.1.1 Samples are collected by use of a personal sampling pump that can be calibrated to within $\pm 5\%$ of the recommended 0.05 L/min sampling rate with the sampling tube in line.

2.1.2 Samples are collected with laboratory prepared sampling tubes.

The sampling tube is constructed of silane-treated glass and is about 5-cm long. The ID is 4 mm and the OD is 6 mm. One end of the tube is tapered so that a glass wool end plug will hold the contents of the tube in place during sampling. The opening in the tapered end of the sampling tube is at least one-half the ID of the tube (2 mm). The other end of the sampling tube is open to its full 4-mm ID to facilitate packing of the tube. Both ends of the tube are fire-polished for safety. The tube is packed with 2 sections of pretreated charcoal which has been coated with TBC. The tube is packed with a 50-mg backup section, located nearest the tapered end, and with a 100-mg sampling section of charcoal. The two sections of coated adsorbent are separated and retained with small plugs of silanized glass wool. Following packing, the sampling tubes are sealed with two 7/32 inch OD plastic end caps. Instructions for the pretreatment and coating of the charcoal are presented in section 4.8 of this method.

2.2 Reagents

None required.

2.3 Technique

2.3.1 Properly label the sampling tube before sampling and then remove the plastic end caps.

2.3.2 Attach the sampling tube to the pump using a section of flexible plastic tubing such that the larger front section of the sampling tube is exposed directly to the atmosphere. Do not place any tubing ahead of the sampling tube. The sampling tube should be attached in the worker's breathing zone in a vertical manner such that it does not impede work performance.

2.3.3 After sampling for the appropriate time, remove the sampling tube from the pump and then seal the tube with plastic end caps. Wrap the tube lengthwise with an official OSHA seal (Form 21).

2.3.4 Include at least one blank for each sampling set. The blank should be handled in the same manner as the samples with the exception that air is not drawn through it.

2.3.5 List any potential interferences on the sample data sheet.

2.3.6 The samples require no special shipping precautions under normal conditions. The samples should be refrigerated if they are to be exposed to higher than normal ambient temperatures. If the samples are to be stored before they are shipped to the laboratory, they should be kept in a freezer. The samples should be placed in a freezer upon receipt at the laboratory.

2.4 Breakthrough (Breakthrough was defined as the relative amount of analyte found on the backup section of the tube in relation to the total amount of analyte collected on the sampling tube.)

Five-percent breakthrough occurred after sampling a test atmosphere containing 2.0 ppm 1,3-butadiene for 90 min at 0.05 L/min. At the end of this time 4.5 L of air had been sampled and 20.1 ug of the analyte was collected. The relative humidity of the sampled air was 80% at 23 °C. (section 4.4)

Breakthrough studies have shown that the recommended sampling procedure can be used at air concentrations higher than the target concentration. The sampling time, however, should be reduced to 45 min if both the expected 1,3-butadiene level and if the relative humidity of the sampled air are high. (section 4.4)

2.5 Desorption efficiency.

The average desorption efficiency for 1,3-butadiene from TBC coated charcoal over the range from 0.6 to 2 times the target concentration was 96.4%. The desorption efficiency was essentially constant over the range studied. (section 4.5)

2.6 Recommended air volume and sampling rate

2.6.1 The recommended air volume is 3 L.

2.6.2 The recommended sampling rate is 0.05 L/min for 1 hour.

2.7 Interferences

There are no known interferences to the sampling method.

2.8 Safety precautions

2.8.1 Attach the sampling equipment to the worker in such a manner that it will not interfere with work performance or safety.

2.8.2 Follow all safety practices that apply to the work area being sampled.

3. Analytical procedure

3.1 Apparatus

3.1.1 A gas chromatograph (GC), equipped with a flame ionization detector (FID). A

Hewlett-Packard Model 5840A GC was used for this evaluation. Injections were performed using a Hewlett-Packard Model 7671A automatic sampler.

3.1.2 A GC column capable of resolving the analytes from any interference. A 20 ft x 1/8 in OD stainless steel GC column containing 20% FFAP on 80/100 mesh Chromabsorb W-AW-DMCS was used for this evaluation.

3.1.3 Vials, glass 2-mL with Teflon-lined caps.

3.1.4 Disposable Pasteur-type pipets, volumetric flasks, pipets and syringes for preparing samples and standards, making dilutions and performing injections.

3.2 Reagents

3.2.1 Carbon disulfide. Fisher Scientific Company A.C.S. Reagent Grade solvent was used in this evaluation.

The benzene contaminant that was present in the carbon disulfide was used as an internal standard (ISTD) in this evaluation.

3.2.2 Nitrogen, hydrogen and air, GC grade.

3.2.3 1,3-butadiene of known high purity. Matheson Gas Products, CP Grade 1,3-butadiene was used in this study.

3.3 Standard preparation

3.3.1 Prepare standards by diluting known volumes of 1,3-butadiene gas with carbon disulfide. This can be accomplished by injecting the appropriate volume of 1,3-butadiene into the headspace above the 1-mL of carbon disulfide contained in sealed 2-mL vial. Shake the vial after the needle is removed from the septum. A standard containing 7.71 µg/mL (at ambient temperature and pressure) was prepared by diluting 4 µL of the gas with 1-mL of carbon disulfide.

3.3.2 The mass of 1,3-butadiene gas which was used to prepare standards can be determined by use of the following equations:

$$MV = (760/BP)(273+T)/(273)(22.41)$$

Where:

MV = ambient molar volume

BP = ambient barometric pressure

T = ambient temperature

µg/µL = 54.09/MV

µg/standard = (µg/µL)(µL) 1,3-butadiene used to prepare the standard

3.4 Sample preparation

3.4.1 Transfer the 100-mg section of the sampling tube to a 2-mL vial. Place the 50-mg section in a separate vial. If the glass wool plugs contain a significant amount of charcoal, place them with the appropriate sampling tube section.

3.4.2 Add 1 mL of carbon disulfide to each vial.

3.4.3 Seal the vials with Teflon-lined caps and then allow them to desorb for one hour. Shake the vials by hand with vigorous force several times during the desorption time.

3.4.4 If it is not possible to analyze the samples within 4 hours of desorption, separate the carbon disulfide from the charcoal, using a disposable Pasteur-type pipet, following the one hour desorption time. This separation will improve the stability of desorbed samples. (Tables 4.5.1.2 and 4.5.1.3)

3.4.5 Save the used sampling tubes to be cleaned and repacked with fresh adsorbent.

3.5 Analysis

3.5.1 GC Conditions

Column temperature: 95 °C

Injector temperature: 180 °C

Detector temperature: 275 °C

Carrier gas flow rate: 30 mL/min

Injection volume: 0.80 µL

GC column: 20-ft x 1/8-in OD stainless steel GC column containing 20% FFAP on 80/100 Chromabsorb W-AW-DMCS.

3.5.2 Chromatogram. See Backup Data section 4.9.

3.5.3 Use a suitable method, such as electronic integration or peak heights, to measure detector response.

3.5.4 Prepare a calibration curve using several standard solutions of different concentrations. Prepare the calibration curve daily. Program the integrator to report the results in µg/mL.

3.5.5 Bracket sample concentrations with standards.

3.6 Interferences (analytical)

3.6.1 Any compound with same general retention time as the analyte and which also gives a detector response is a potential interference. Possible interferences should be reported to the laboratory with submitted samples by the industrial hygienist.

3.6.2 GC parameters (temperature, column, etc.) may be changed to circumvent interferences.

3.6.3 A useful means of structure designation is GC/MS. It is recommended that this procedure be used to confirm samples whenever possible.

3.7 Calculations

3.7.1 Results are obtained by use of calibration curves. Calibration curves are prepared by plotting detector response against concentration for each standard. The best line through the data points is determined by curve fitting.

3.7.2 The concentration, in µg/mL, for a particular sample is determined by comparing its detector response to the calibration curve. If any analyte is found on the backup section, this amount is added to the amount found on the front section. Blank corrections should be performed before adding the results together.

3.7.3 The 1,3-butadiene air concentration can be expressed using the following equation:

$$\text{mg/m}^3 = [A](B)/[C](D)$$

Where:

A = µg/mL from section 3.7.2

B = desorption volume

C = L of air sampled

D = desorption efficiency

3.7.4 The following equation can be used to convert results in mg/m³ to ppm:

$$\text{ppm} = (\text{mg/m}^3) (24.46)/54.09$$

Where:

mg/m³ = result from section 3.7.3.

24.46 = molar volume of an ideal gas at 760 mm Hg and 25 °C.

3.8 Safety precautions (analytical)

3.8.1 Avoid skin contact and inhalation of all chemicals.

3.8.2 Restrict the use of all chemicals to a fume hood whenever possible.

3.8.3 Wear safety glasses and a lab coat in all laboratory areas.

4. Backup Data

4.1 Detection limit data

4.1.1 Detection limit of analytical procedure. The injection size recommended in the analytical procedure (0.80 µL) was used in the determination of the detection limit for the analytical procedure. The detection limit for the analytical procedure was 304 pg per injection. This was the amount of 1,3-butadiene which gave a measurable response relative to interferences present in a standard. This detection limit was determined by the analysis of a standard containing 380 ng/mL 1,3-butadiene. Fig. 4.1.1 is a chromatogram of the detection limit of the analytical procedure.

4.1.2 Detection limit of the overall procedure. The injection size recommended in the analytical procedure (0.80 µL) was used in the determination of the detection limit of the overall procedure. 1,3-butadiene was diluted for use in this study by adding pure analyte to a sealed, silanized vial containing air and a few crystals of TBC. Samples were prepared by injecting 100-mg portions of TBC coated charcoal with appropriate amounts of the diluted 1,3-butadiene. The samples were stored in a freezer overnight before analysis to allow complete adsorption of the analyte. Each result is the average of at least 2 samples. The results of this study are presented in Table 4.1.2 and in Fig. 4.1.2.

4.2 Reliable quantitation limit data

The injection size recommended in the analytical procedure (0.80 µL) was used in the determination of the reliable quantitation limit (RQL). The amount of 1,3-butadiene which provided a recovery of 75% from the sampling media was determined graphically (Fig. 4.2.1) from the data in Table 4.1.2. This amount was 1.03 µg. A chromatogram of the RQL is presented in Fig. 4.2.2. Six samples were used to determine the precision at the RQL. The samples were prepared in a similar manner as those in section 4.1.2. The results of this study are presented in Table 4.2. and in Fig. 4.2.1.

4.3 Sensitivity and precision (analytical method only)

The sensitivity and precision of the analytical procedure were evaluated by performing multiple injections of analytical standards. The standards were prepared by injecting appropriate amounts of 1,3-butadiene gas diluted with carbon disulfide. The data are presented in Table 4.3. and also in Fig. 4.3. The ISTD data are the results of an internal standard calibration using the benzene contaminant present in carbon disulfide as the internal standard.

TABLE 4.1.2—DETECTION LIMIT DATA

Sample No.	µg spiked	µg recovered	Percent recovered
1	0.38	0.26	68.4
2	0.58	0.34	58.6
3	0.76	0.48	63.2
4	0.96	0.67	69.8
5	1.2	1.0	83.3
6	1.4	1.3	92.8
7	1.9	1.9	100.0

The detection limit of the overall procedure was determined graphically (Fig. 4.1.2.) from the data in Table 4.1.2. This amount was 0.60 µg per sample.

TABLE 4.2.—RELIABLE QUANTITATION LIMIT DATA

	Sample No.	µg spiked	µg recovered	Percent recovered
	1	1.03	0.854	82.9
	2	1.03	0.754	73.2
	3	1.03	0.829	80.5
	4	1.03	0.779	75.6
	5	1.03	0.836	81.2

TABLE 4.2.—RELIABLE QUANTITATION LIMIT DATA—Continued

	Sample No.	µg spiked	µg recovered	Percent recovered
	6	1.03	0.836	81.2
X		1.03	0.815	79.1
SD				3.8
1.96 SD				7.4

TABLE 4.3—1,3-BUTADIENE SENSITIVITY AND PRECISION DATA

	0.6X		1X		2X	
	3.86 µg/sample		6.75 µg sample		13.5 µg sample	
	ISTD	area	ISTD	area	ISTD	area
	3.85	1332	6.66	2371	13.4	5190
	3.89	1509	6.73	2386	13.5	5167
	3.85	1507	6.78	2369	13.7	5076
	3.81	1345	6.78	2393	13.5	5097
	3.81	1416	6.86	2529	13.6	5045
	3.95	1354	6.75	2327	13.3	5087
	3.86		6.76		13.5	
X	0.0138		0.00977		0.0105	
CV	0.011					
CV						

The sensitivity for 1,3-butadiene was 387 area counts per µg/mL.

4.4 Breakthrough data

Breakthrough was defined as the relative amount of 1,3-butadiene found on the 50 mg sampling tube section in relation to the total amount collected on the sampling tube.

Three breakthrough studies were performed at twice the target level with the recommended air sampler. The test atmospheres were generated by diluting the effluent of a gas cylinder containing 100 ppm 1,3-butadiene with humid air. The concentrations of the test atmospheres were determined by direct injection of the atmosphere into a gas chromatograph. The gas chromatograph was calibrated using 1,3-butadiene from another source that had been diluted with dry air in a Teflon gas bag. The average concentration of the test atmospheres was 2.0 ppm. The average relative humidity of these test atmospheres was 80% at 23 °C. The sampling rates were about 0.05 L/min. The results of these studies are presented in Table 4.4.1.

Additional breakthrough studies were performed at concentrations higher than twice the target level in order to determine if the recommended sampling procedure would be reliable at those concentrations. The test atmospheres used in these studies were generated and their concentrations were determined using the techniques previously described.

TABLE 4.4.1—1,3-BUTADIENE BREAKTHROUGH AT TWICE THE TARGET CONCENTRATION

Sampling time, min	Amt. on 100 mg section, µg	Amt. on 50 mg section, µg	Percent breakthrough
91	23.4	0.0	0.0
124	27.8	3.1	10.0
155	30.4	6.1	16.7
60	14.6	0.0	0.0
91	21.6	1.2	5.3
121	25.5	3.5	12.1
50	8.6	0.0	0.0
76	13.0	0.0	0.0
92	14.4	0.6	4.0
105	15.7	2.2	12.3
125	17.0	2.4	12.4

When the results of the three studies were combined, 5% breakthrough occurred after sampling for 90 minutes. The air volume sampled after this time was 4.5 L and the amount of 1,3-butadiene collected was 20.1 µg.

Percent recovery values were calculated using sample results and the actual concentration of the test atmospheres. The sampling rates were about 0.05 L/min. The results of these studies are presented in Tables 4.4.2 through 4.4.4.

4.5 Desorption efficiency and stability of deabsorbed samples

4.5.1 *Pre-treated charcoal coated with TBC.* The desorption efficiency of 1,3-butadiene was determined by injecting the gas onto 100-mg portions of the recommended collection medium. The samples were spiked and then stored in a freezer overnight prior to analysis. The average desorption efficiency over the range of 0.6 to 2 times the target concentration was 96.4%. The individual results are presented in Table 4.5.1.1.

The stability of deabsorbed samples was investigated by reanalyzing the target

concentration desorption samples at various times after carbon disulfide addition. Freshly prepared standards were used for each analysis. The sample vials were resealed immediately after each analysis. The results of this study are presented in Table 4.5.1.2. The percent recovery is based on the theoretical amount of 1,3-butadiene added to the original samples.

TABLE 4.4.2—1,3-Butadiene Breakthrough Study at 7.3 PPM

[Relative Humidity = 77% at 22 °C]

Sampling time, min	Air volume sampled, L	Percent breakthrough	Percent recovery
15	0.73	0.0	80.2
30	1.6	0.0	94.2
45	2.2	0.0	96.8
60	3.1	0.0	99.4
75	3.5	0.6	96.7
90	4.5	8.4	95.8

Five percent breakthrough occurred after sampling for 84 min. At the end of this time, 4.2 L of air had been sampled and 68 µg of 1,3-butadiene had been collected.

TABLE 4.4.3—1,3-Butadiene Breakthrough Study at 32 PPM

[Relative humidity = 47% at 24 °C]

Sampling time, min	Air volume sampled, L	Percent breakthrough	Percent recovery
15	0.71	0.0	87.3
46	2.3	0.0	87.2
60	3.2	0.0	91.2

TABLE 4.4.3—1,3-Butadiene Breakthrough Study at 32 PPM—Continued

[Relative humidity = 47% at 24°C]

Sampling time, min	Air volume sampled, L	Percent breakthrough	Percent recovery
90.....	4.3	0.0	94.8
105.....	5.2	0.0	95.0
120.....	6.3	0.0	97.5
155.....	8.2	0.0	93.0

No breakthrough was observed, even after sampling for 155 minutes. This data shows that, at low relative humidity, the recommended sampling media has considerable capacity for 1,3-butadiene.

TABLE 4.4.4—1,3-Butadiene Breakthrough Study at 36-ppm

[Relative humidity = 90% at 21°C]

Sampling time, min	Air volume sampled, L	Percent breakthrough	Percent recovery
36.....	1.9	0.0	105.8
47.....	2.2	0.0	98.8
60.....	3.0	21.6	90.2
75.....	3.9	30.0	96.0
90.....	4.3	30.6	76.4
105.....	5.8	32.1	57.6
121.....	6.3	31.1	56.7

It is apparent from the data in Tables 4.4.2 through 4.4.4 that the recommended sampling and analytical method can be used at 1,3-butadiene levels higher than

the target concentration. The relative humidity of the sampled air has a significant effect on the ability of the sampling device to retain the analyte.

TABLE 4.5.1.1—THE DESORPTION EFFICIENCY OF 1,3-BUTADIENE FROM CHARCOAL COATED WITH TBC

	Percent desorption efficiency		
	3.86 µg 0.6X	6.75 µg 1.0X	13.5 µg 2.0
	94.3	100.0	97.5
	95.4	97.0	97.5
	96.4	102.0	95.8
	96.9	96.0	95.2
	94.8	94.3	93.4
	96.9	98.8	92.5
	95.8	98.0	95.3
X.....	95.5	98.0	95.3

TABLE 4.5.1.2—THE STABILITY OF 1,3-BUTADIENE AFTER DESORPTION FROM CHARCOAL COATED WITH TBC

Hours after CS ₂ addition	Sample number (percent recovery)						
	1	2	3	4	5	6	X
1.....	100.0	97.0	102.0	96.0	94.3	98.8	98.0
4.....	98.7	95.1	97.7	89.0	88.6	87.4	92.8
9.....	90.2	89.4	92.2	88.7	88.0	89.4	89.6
16.....	84.2	82.2	84.1	81.3	80.3	86.6	83.1
24.....	82.4	76.8	79.7	76.6	72.3	79.0	77.8
58.....	66.8	50.4	52.3	61.5	60.6	64.2	59.3

To determine if the stability of desorbed samples could be improved, the following experiment was performed: Twelve samples were prepared by injecting 1,3-butadiene gas, at the target concentration, onto 100-mg

portions of the recommended sampling media. The samples were spiked and then stored in a freezer overnight prior to analysis. Following desorption and analysis, the carbon disulfide was separated from the

charcoal for six of the samples. The other six samples were not separated. All of the samples were reanalyzed using freshly prepared standards and the results of this study are presented in Table 4.5.1.3.

TABLE 4.5.1.3—EFFECT OF CHARCOAL ON THE STABILITY OF 1,3-BUTADIENE IN CS₂

Storage time h	CS ₂ /charcoal separated				CS ₂ /charcoal not separated			
	1	2	3	X	1	2	3	X
6.....	93.1	91.8	93.5	92.8	93.6	91.3	93.1	92.7
28.....	88.9	90.1	92.4	90.5	76.8	74.0	76.2	75.7

It appears that the stability of desorbed samples can be improved by separating the carbon disulfide from the charcoal.

4.5.2 Untreated charcoal. The desorption efficiency of 1,3-butadiene was also determined for untreated SKC, Inc. Lot 120 coconut shell charcoal in the same manner as used for the recommended medium. The average desorption efficiency over the range of 0.6 to 2 times the target concentration was 60.4%. The individual results are presented in Table 4.5.2.1.

The stability of 1,3-butadiene desorbed from untreated SKC, Inc. Lot 120 charcoal was investigated in the same manner as was the recommended medium. The results of this study are presented in Table 4.5.2.2.

4.6 Storage data.

4.6.1 Pretreated charcoal coated with TBC. The test atmosphere was generated by diluting the effluent of a gas cylinder,

containing 100 ppm 1,3-butadiene, with humid air. The resultant atmosphere contained 1 ppm 1,3-butadiene, the relative humidity of the air was 75% and its temperature was 25°C.

The 1,3-butadiene content of the test atmosphere was determined by direct injection of 100 µL of the atmosphere into a gas chromatograph. The gas chromatograph was calibrated using 1,3-butadiene, from another source, which had been diluted with dry air in a Teflon gas bag. Samples were collected, using the recommended method, and they were stored either at -25°C or at ambient temperature. The results of the storage test are presented in Table 4.6.1 and also in Figures 4.6.1.1 and 4.6.1.2.

TABLE 4.5.2.1—THE DESORPTION EFFICIENCY OF 1,3-BUTADIENE FROM SKC, INC. LOT 120 CHARCOAL

	Percent desorption efficiency		
	3.86 µg 0.6X	6.75 µg 1.0X	13.5 µg 2.0X
	61.6	67.3	67.1
	66.7	64.1	65.0
	61.5	61.7	62.8
	54.4	62.0	61.4
	52.3	57.9	58.7
	51.7	53.3	58.8
X.....	58.0	61.0	62.3

TABLE 4.5.2.2—The Stability of 1,3-BUTADIENE AFTER DESORPTION FROM SKC, INC. LOT 120 Charcoal

Hours after CS ₂ addition	sample number						
	1	2	3	4	5	6	X
5.....	43.8	44.0	40.1	40.6	38.8	38.4	41.0

These data show that SKC, Inc. Lot 120 charcoal is inadequate for this application because of sample instability.

TABLE 4.6.1—1,3-BUTADIENE STORAGE TEST USING TBC COATED CHARCOAL

Storage time, days	Ambient recovery			Storage time, days	Refrigerated recovery		
	Percent	Percent	Percent		Percent	Percent	Percent
0.....	102.2	102.2	99.1	0	97.0	101.8	97.8
3.....	97.8	93.3	93.3	4	99.5	96.9	98.7
6.....	100.9	98.7	100.9	7	93.2	104.9	102.2
10.....	93.8	87.5	83.9	11	98.6	94.6	92.4
13.....	82.1	88.8	80.8	14	104.1	96.9	98.2
17.....	81.2	76.3	76.8	18	84.3	94.6	96.4

4.6.2 *Untreated charcoal.* An additional ambient temperature storage test was performed using untreated SKC, Inc. Lot 120 charcoal as sampling media. The test atmosphere was generated and its concentration determined in the same manner as was used for the recommended method. The concentration of the test atmosphere was 1 ppm. The relative humidity of this atmosphere was 70% at 23°C. Sampling was performed at 0.05 L/min for 1 hour. The results of this study are presented in Table 4.6.2 and also in Fig. 4.6.2.

4.7 Reproducibility data

Samples were collected from a test atmosphere which was generated by diluting the effluent of a gas cylinder, containing 100 ppm 1,3-butadiene, with humid air. The resultant atmosphere contained 1 ppm 1,3-butadiene and the relative humidity of the air was 84% at 23°C. The 1,3-butadiene content of the test atmosphere was determined by the direct injection of 100 µL of the atmosphere into a GC. The GC was calibrated using 1,3-butadiene, from another source, which had been diluted with dry air in a Teflon gas bag. The samples and a draft copy of this evaluation were given to a chemist unassociated with this work. The samples

TABLE 4.6.2—1,3-BUTADIENE AMBIENT TEMPERATURE STORAGE TEST USING SKC, INC. LOT 120 CHARCOAL

Storage time, days	Sample number (percent recovery)		
	1	2	3
0.....	33.5	36.3	33.5
3.....	31.3	30.1	29.0
6.....	17.9	12.8	14.9
10.....	29.0	22.5	22.6
13.....	25.2	23.8	19.9
17.....	18.2	19.8	17.4

were analyzed after 3 days storage at reduced temperature. The results are presented in Table 4.7.

TABLE 4.7—REPRODUCIBILITY

Number	Sample percent recovery
1.....	100.0
2.....	102.9
3.....	100.5
4.....	98.0
5.....	96.6
6.....	85.4
x.....	97.2
SD.....	6.2

4.8 A procedure to prepare specially cleaned charcoal coated with TBC

4.8.1 Apparatus.

4.8.1.1 Magnetic stirrer and stir bar.

4.8.1.2 Tube furnace capable of maintaining a temperature of 700°C and equipped with a quartz tube that can hold 30 g of charcoal. A Lindberg Type 55035 tube furnace was used in this evaluation.

4.8.1.3 A means to purge nitrogen gas through the charcoal inside the quartz tube.

4.8.1.4. Water bath capable of maintaining a temperature of 60°C.

4.8.1.5. Miscellaneous laboratory equipment: One-liter vacuum flask, 1-L Erlenmeyer flask, 350-mL Buchner funnel with a coarse fitted disc, 4-oz brown bottle, rubber stopper, Teflon tape etc.

4.8.2. Reagents.

4.8.2.1 Phosphoric acid, 10% by weight, in water. "Baker Analyzed" Reagent grade was diluted with water for use in this evaluation.

4.8.2.2. 4-tert-Butylcatechol (TBC). The Aldrich Chemical Company 99% grade was used in this evaluation. CAUTION-The bottle

was labeled: Sensitizer! Severe irritant! Toxic! Refrigerate!

4.8.2.3. Specially cleaned coconut shell charcoal, 20/40 mesh. Specially cleaned charcoal (Lot number 482338) was obtained from Supelco, Inc. for use in this evaluation. The cleaning process used by Supelco is proprietary.

4.8.2.4. Nitrogen gas, GC grade.

4.8.3. Procedure. Weigh 30 g of charcoal into a 500-mL Erlenmeyer flask. Add about 250 mL of 10% phosphoric acid to the flask and then swirl the mixture. Stir the mixture for 1 hour using a magnetic stirrer. Filter the mixture using a fitted Buchner funnel. Wash the charcoal several times with 250-mL portions of deionized water to remove all traces of the acid. Transfer the washed charcoal to the tube furnace quartz tube. Place the quartz tube in the furnace and then connect the nitrogen gas purge to the tube. Fire the charcoal to 700°C. Maintain that temperature for at least 1 hour. After the charcoal has cooled to room temperature, transfer it to a tared beaker. Determine the weight of the charcoal and then add an amount of TBC which is 10% of the charcoal, by weight. CAUTION-TBC is toxic and should only be handled in a fume hood while wearing gloves. Carefully mix the contents of the beaker and then transfer the mixture to a 4-oz bottle. Stopper the bottle with a clean rubber stopper which has been wrapped with Teflon tape. Clamp the bottle in a water bath so that the water level is above the charcoal level. Gently heat the bath to 60°C and then maintain that temperature for 1 hour. Cool the charcoal to room temperature and then transfer the coated charcoal to a suitable container.

The coated charcoal is now ready to be packed into sampling tubes. The sampling tubes should be stored in a sealed container to prevent contamination. Sampling tubes

should be stored in the dark at room temperature. The sampling tubes should be segregated by coated adsorbent lot number.

4.9 Chromatograms

The chromatograms were obtained using the recommended analytical method. The chart speed was set at 1 cm/min for the first three min and then at 0.2 cm/min for the time remaining in the analysis.

Figs. 4.2.2. and 4.9.2 are chromatograms of 1,3-butadiene deabsorbed from the recommended sampling media. The peak

which eluted just before 1,3-butadiene is a reaction product between an impurity on the charcoal and TBC. This peak is always present, but it is easily resolved from the analyte. The peak which eluted immediately before benzene is an oxidation product of TBC.

5. References

5.1. "Current Intelligence Bulletin 41, 1,3-Butadiene", U.S. Dept. of Health and Human Services, Public Health Service, Center for Disease Control, NIOSH.

5.2. "NIOSH Manual of Analytical Methods", 2nd ed; U.S. Dept. of Health Education and Welfare, National Institute for Occupational Safety and Health: Cincinnati, OH, 1977, Vol. 2, Method No. S91 DHEW (NIOSH) Publ. (US), No. 77-157-B.

5.3. Hawley, G.C., Ed. "The Condensed Chemical Dictionary", 8th ed.; Van Nostrand Reinhold Company: New York, 1971; 139.5.4. *Chem. Eng. News* (June 10, 1985), (63), 22-66.

BILLING CODE 4510-26-M

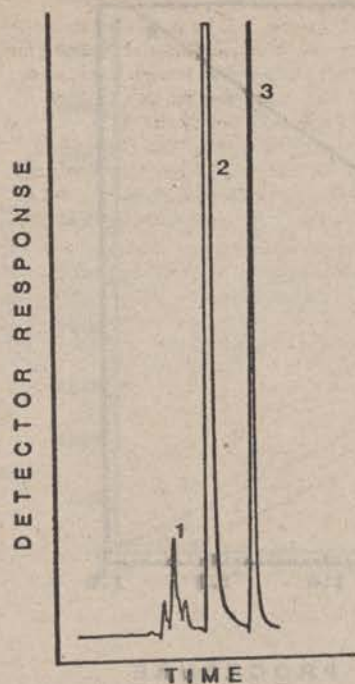


FIG. 4.1.1. DETECTION
LIMIT CHROMATOGRAM

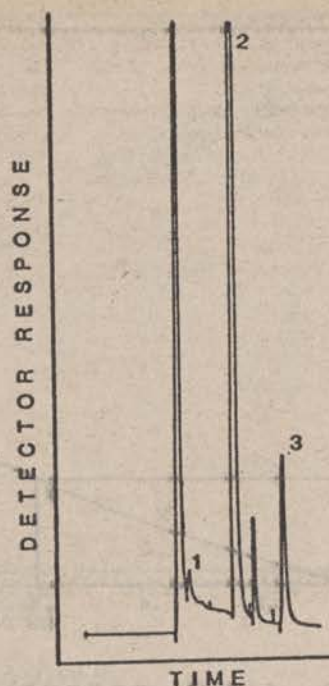


FIG. 4.2.2. RQL
CHROMATOGRAM

PEAK IDENTIFICATION		
peak number	peak identity	RT, min
1	1,3-butadiene	2.3
2	carbon disulfide	4.2
3	benzene	9.2

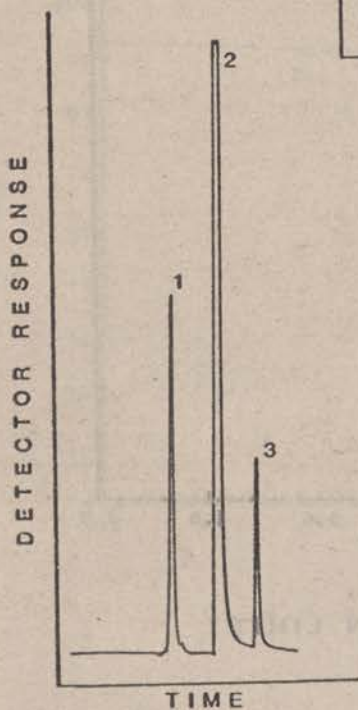


FIG. 4.9.1. STANDARD
CHROMATOGRAM

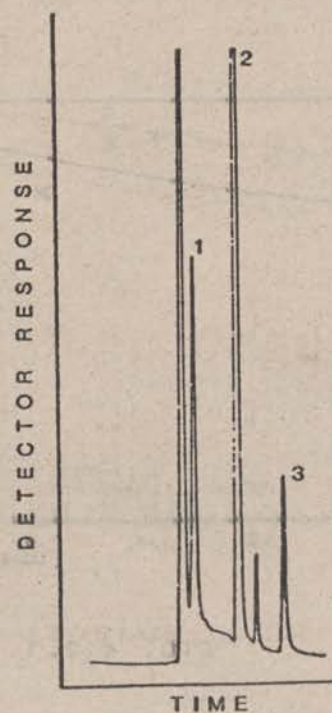


FIG. 4.9.2. SAMPLE
CHROMATOGRAM

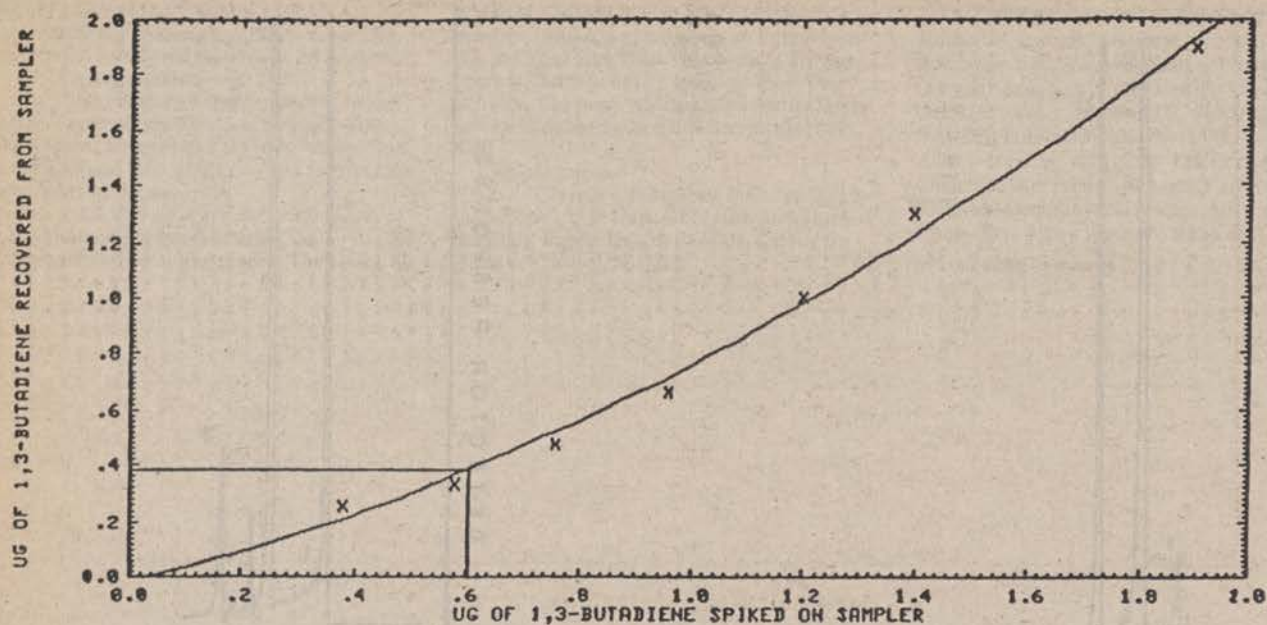


FIG. 4.1.2. DETECTION LIMIT OF THE OVERALL PROCEDURE

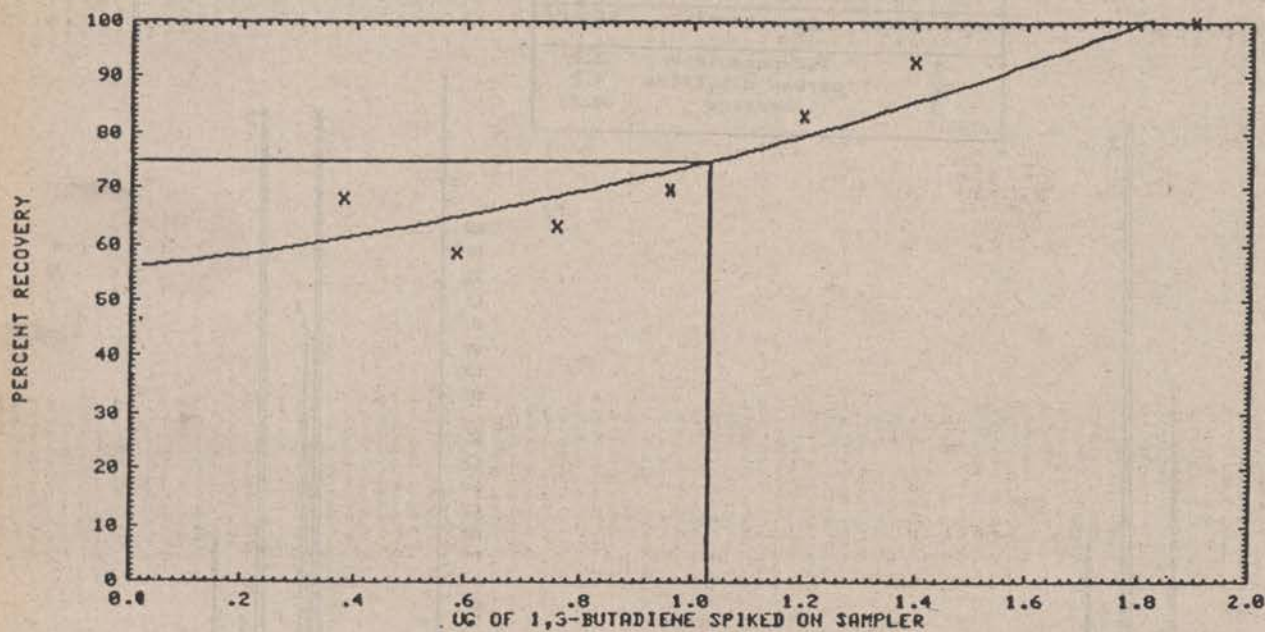


FIG. 4.2.1. THE RELIABLE QUANTITION LIMIT

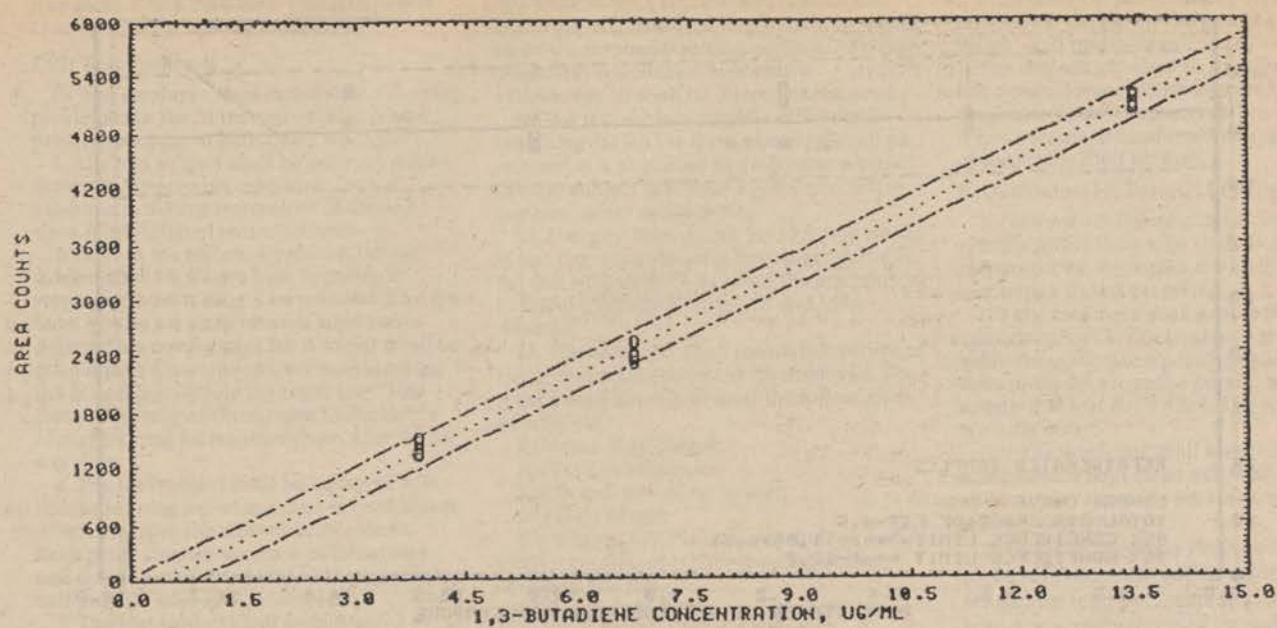


FIG. 4.3. CALIBRATION CURVE

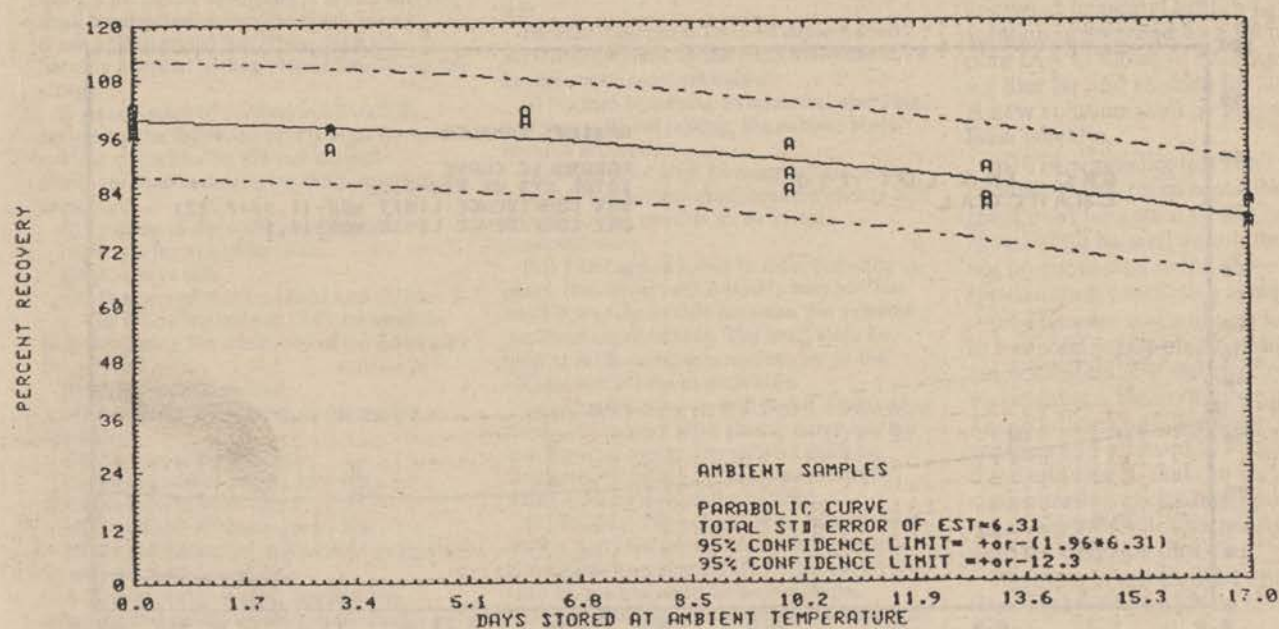


FIG. 4.6.1.1. AMBIENT TEMPERATURE STORAGE TEST

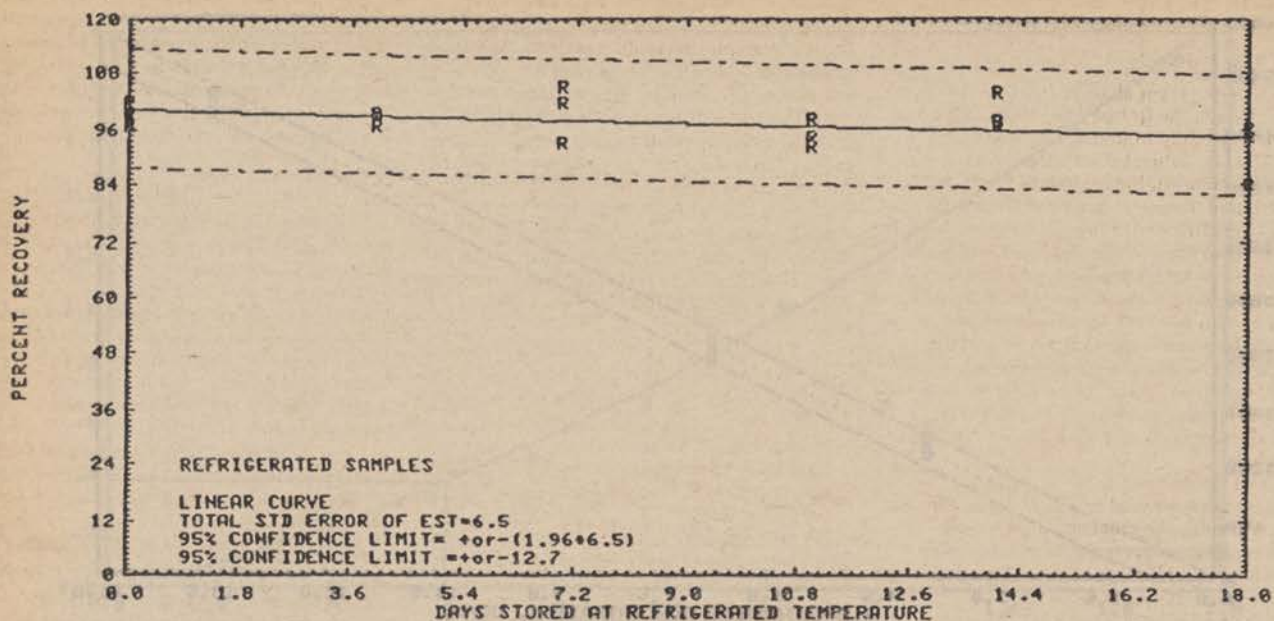


FIG. 4.6.1.2. REDUCED TEMPERATURE STORAGE TEST

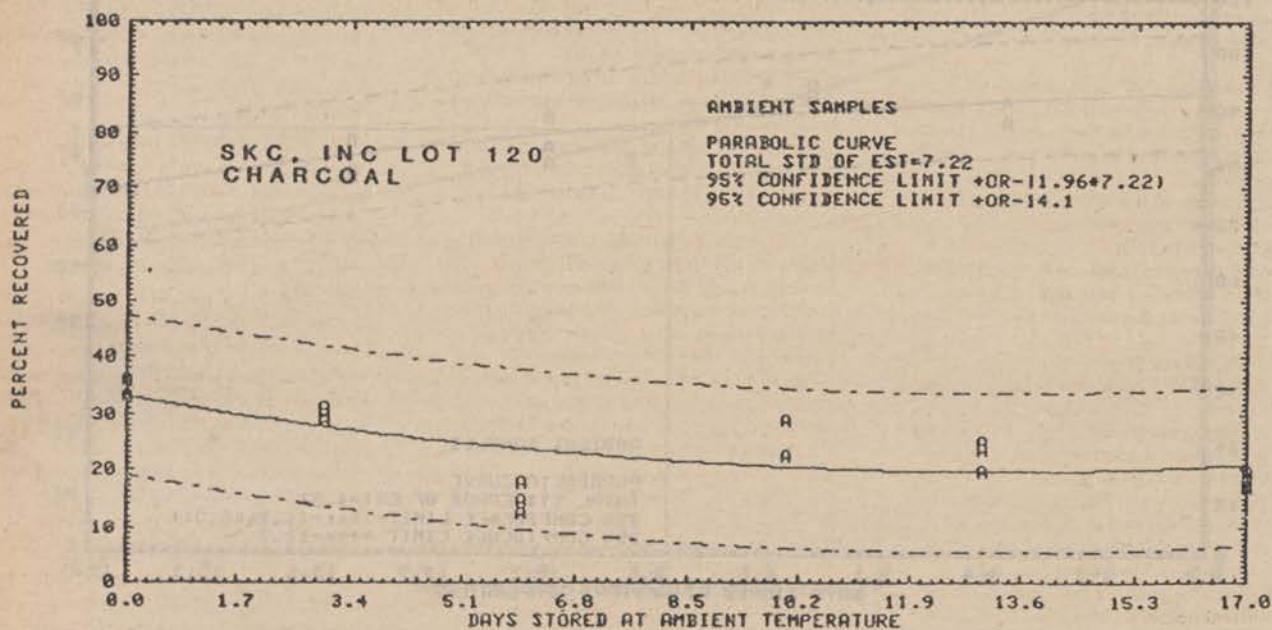


FIG. 4.6.2. AMBIENT TEMPERATURE STORAGE TEST

Appendix E to § 1910.1015: Qualitative and Quantitative Fit Testing Procedures

I. Fit Test Protocols

A. The employer shall include the following provisions in the fit test procedures. These provisions apply to both QLFT and QNFT.

1. The test subject shall be allowed to pick the most comfortable respirator from a selection including respirators of various sizes from different manufacturers.

2. Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine a comfortable fit. A mirror shall be available to assist the subject in evaluating the fit and positioning the respirator. This instruction may not constitute the subject's formal training on respirator use, as it is only a review.

3. The test subject shall be informed that he/she is being asked to select the respirator which provides the most comfortable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.

4. The test subject shall be instructed to hold each facepiece up to the face and eliminate those which obviously do not give a comfortable fit.

5. The more comfortable facepieces are noted; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given by discussing the points in item 6 below. If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.

6. Assessment of comfort shall include reviewing the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator:

- (i) Position of the mask on the nose;
- (ii) Room for eye protection;
- (iii) Room to talk;
- (iv) Position of mask on face and cheeks.

7. The following criteria shall be used to help determine the adequacy of the respirator fit:

- (i) Chin properly placed;
- (ii) Adequate strap tension, not overly tightened;
- (iii) Fit across nose bridge;
- (iv) Respirator of proper size to span distance from nose to chin;
- (v) Tendency of respirator to slip;
- (vi) Self-observation in mirror to evaluate fit and respirator position.

8. The test subject shall conduct the negative and positive pressure fit checks as described below or in ANSI Z88.2-1980. Before conducting the negative or positive pressure test, the subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. Another facepiece shall be selected and retested if the test subject fails the fit check tests.

9. The test shall not be conducted if there is any hair growth between the skin and the

facepiece sealing surface, such as stubble beard growth, beard, or long sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed.

10. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician to determine whether the test subject can wear a respirator while performing her or his duties.

11. If at any time within the first two weeks of use the respirator becomes uncomfortable, the test subject shall be given the opportunity to select a different facepiece and to be retested.

12. The employer shall maintain a record of the fit test administered to an employee. The record shall contain at least the following information:

- (i) Name of employee;
- (ii) Type of respirator;
- (iii) Brand, size of respirator;
- (iv) Date of test;
- (v) Where QNFT is used: the fit factor, strip chart recording or other recording of the results of the test.

The record shall be maintained until the next annual fit test is administered.

13. Exercise regimen. Prior to the commencement of the fit test, the test subject shall be given a description of the fit test and the test subject's responsibilities during the test procedure. The description of the process shall include a description of the test exercises that the subject will be performing. The respirator to be tested shall be worn for at least 5 minutes before the start of the fit test.

14. Test Exercises. The test subject shall perform exercises, in the test environment, in the manner described below:

- (i) Normal breathing. In a normal standing position, without talking, the subject shall breathe normally.
- (ii) Deep breathing. In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as to not hyperventilate.
- (iii) Turning head side to side. Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.
- (iv) Moving head up and down. Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).
- (v) Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song.
- (vi) Grimace. The test subject shall grimace by smiling or frowning.
- (vii) Bending over. The test subject shall bend at the waist as if he/she were to touch his/her toes. Jogging in place shall be substituted for this exercise in those test environments such as shroud type QNFT units which prohibit bending at the waist.
- (viii) Normal breathing. Same as exercise (i).

Each test exercise shall be performed for one minute except for the grimace exercise which shall be performed for 15 seconds.

The test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become uncomfortable, another model of respirator shall be tried.

B. Qualitative Fit Test (QLFT) Protocols

1. General. (i) The employer shall assign specific individuals who shall assume full responsibility for implementing the respirator qualitative fit test program.

(ii) The employer shall ensure that persons administering QLFT are able to prepare test solutions, calibrate equipment and perform tests properly, recognize invalid tests, and assure that test equipment is in proper working order.

(iii) The employer shall assure that QLFT equipment is kept clean and well maintained so as to operate at the parameters for which it was designed.

2. Isoamyl Acetate Protocol.—(i) Odor threshold screening. The odor threshold screening test, performed without wearing a respirator, is intended to determine if the individual tested can detect the odor of isoamyl acetate.

(a) Three 1 liter glass jars with metal lids are required.

(b) Odor free water (e.g. distilled or spring water) at approximately 25 °C shall be used for the solutions.

(c) The isoamyl acetate (IAA) (also known as isopentyl acetate) stock solution is prepared by adding 1 cc of pure IAA to 800 cc of odor free water in a 1 liter jar and shaking for 30 seconds. A new solution shall be prepared at least weekly.

(d) The screening test shall be conducted in a room separate from the room used for actual fit testing. The two rooms shall be well ventilated but shall not be connected to the same recirculating ventilation system.

(e) The odor test solution is prepared in a second jar by placing 0.4 cc of the stock solution into 500 cc of odor free water using a clean dropper or pipette. The solution shall be shaken for 30 seconds and allowed to stand for two to three minutes so that the IAA concentration above the liquid may reach equilibrium. This solution shall be used for only one day.

(f) A test blank shall be prepared in a third jar by adding 500 cc of odor free water.

(g) The odor test and test blank jars shall be labeled 1 and 2 for jar identification. Labels shall be placed on the lids so they can be periodically peeled, dried off and switched to maintain the integrity of the test.

(h) The following instruction shall be typed on a card and placed on the table in front of the two test jars (i.e., 1 and 2):

"The purpose of this test is to determine if you can smell banana oil at a low concentration. The two bottles in front of you contain water. One of these bottles also contains a small amount of banana oil. Be sure the covers are on tight, then shake each bottle for two seconds. Unscrew the lid of each bottle, one at a time, and sniff at the mouth of the bottle. Indicate to the test conductor which bottle contains banana oil."

(i) The mixtures used in the IAA odor detection test shall be prepared in an area separate from where the test is performed, in order to prevent olfactory fatigue in the subject.

(j) If the test subject is unable to correctly identify the jar containing the odor test solution, the IAA qualitative fit test shall not be performed.

(k) If the test subject correctly identifies the jar containing the odor test solution, the test subject may proceed to respirator selection and fit testing.

(ii) *Isoamyl acetate fit test.* (a) The fit test chamber shall be similar to a clear 55-gallon drum liner suspended inverted over a 2-foot diameter frame so that the top of the chamber is about 6 inches above the test subject's head. The inside top center of the chamber shall have a small hook attached.

(b) Each respirator used for the fitting and fit testing shall be equipped with organic vapor cartridges or offer protection against organic vapors. The cartridges or masks shall be changed at least weekly.

(c) After selecting, donning, and properly adjusting a respirator, the test subject shall wear it to the fit testing room. This room shall be separate from the room used for odor threshold screening and respirator selection, and shall be well ventilated, as by an exhaust fan or lab hood, to prevent general room contamination.

(d) A copy of the test exercises and any prepared text from which the subject is to read shall be taped to the inside of the test chamber.

(e) Upon entering the test chamber, the test subject shall be given a 6-inch by 5-inch piece of paper towel, or other porous, absorbent, single-ply material, folded in half and wetted with 0.75 cc of pure IAA. The test subject shall hang the wet towel on the hook at the top of the chamber.

(f) Allow two minutes for the IAA test concentration to stabilize before starting the fit test exercises. This would be an appropriate time to talk with the test subject; to explain the fit test, the importance of his/her cooperation, and the purpose for the head exercises; or to demonstrate some of the exercises.

(g) If at any time during the test, the subject detects the banana like odor of

IAA, the test has failed. The subject shall quickly exit from the test chamber and leave the test area to avoid olfactory fatigue.

(h) If the test has failed, the subject shall return to the selection room and remove the respirator, repeat the odor sensitivity test, select and put on another respirator, return to the test chamber and again begin the procedure described in (a) through (g) above. The process continues until a respirator that fits well has been found. Should the odor sensitivity test be failed, the subject shall wait about 5 minutes before retesting. Odor sensitivity will usually have returned by this time.

(i) When a respirator is found that passes the test, its efficiency shall be demonstrated for the subject by having the subject break the face seal and take a breath before exiting the chamber.

(j) When the test subject leaves the chamber, the subject shall remove the saturated towel and return it to the person conducting the test. To keep the test area from becoming contaminated, the used towels shall be kept in a self sealing bag so there is no significant IAA concentration build-up in the test chamber during subsequent tests.

3. *Saccharin Solution Aerosol Protocol.* The saccharin solution aerosol QLFT protocol is the only currently available, validated test protocol for use with particulate disposable dust respirators not equipped with high-efficiency filters. The entire screening and testing procedure shall be explained to the test subject prior to the conduct of the screening test.

(i) Taste threshold screening. The saccharin taste threshold screening, performed without wearing a respirator, is intended to determine whether the individual being tested can detect the taste of saccharin.

(a) During threshold screening as well as during fit testing, subjects shall wear an enclosure about the head and shoulders that is approximately 12 inches in diameter by 14 inches tall with at least the front portion clear and that allows free movements of the head when a respirator is worn. An enclosure substantially similar to the 3M hood assembly, parts # FT 14 and # FT 15 combined, is adequate.

(b) The test enclosure shall have a 3/4-inch hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle.

(c) The test subject shall don the test enclosure. Throughout the threshold screening test, the test subject shall breathe through his/her wide open mouth with tongue extended.

(d) Using a DeVilbiss Model 40 Inhalation Medication Nebulizer the test conductor shall spray the threshold check solution into the enclosure. This nebulizer shall be clearly marked to distinguish it from the fit test solution nebulizer.

(e) The threshold check solution consists of 0.83 grams of sodium saccharin USP in 1 cc of warm water. It can be prepared by putting 1

cc of the fit test solution (see (ii)(e) below) in 100 cc of distilled water.

(f) To produce the aerosol, the nebulizer bulb is firmly squeezed so that it collapses completely, then released and allowed to fully expand.

(g) Ten squeezes are repeated rapidly and then the test subject is asked whether the saccharin can be tasted.

(h) If the first response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the saccharin is tasted.

(i) If the second response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the saccharin is tasted.

(j) The test conductor will take note of the number of squeezes required to solicit a taste response.

(k) If the saccharin is not tasted after 30 squeezes (step 10), the test subject may not perform the saccharin fit test.

(l) If a taste response is elicited, the test subject shall be asked to take note of the taste for reference in the fit test.

(m) Correct use of the nebulizer means that approximately 1 cc of liquid is used at a time in the nebulizer body.

(n) The nebulizer shall be thoroughly rinsed in water, shaken dry, and refilled at least each morning and afternoon or at least every four hours.

(ii) *Saccharin solution aerosol fit test procedure.* (a) The test subject may not eat, drink (except plain water), or chew gum for 15 minutes before the test.

(b) The fit test uses the same enclosure described in (i) above.

(c) The test subject shall don the enclosure while wearing the respirator selected in section (i) above. The respirator shall be properly adjusted and equipped with a particulate filter(s).

(d) A second DeVilbiss Model 40 Inhalation Medication Nebulizer is used to spray the fit test solution into the enclosure. This nebulizer shall be clearly marked to distinguish it from the screening test solution nebulizer.

(e) The fit test solution is prepared by adding 83 grams of sodium saccharin to 100 cc of warm water.

(f) As before, the test subject shall breathe through the wide open mouth with tongue extended.

(g) The nebulizer is inserted into the hole in the front of the enclosure and the fit test solution is sprayed into the enclosure using the same number of squeezes required to elicit a taste response in the screening test.

(h) After generating the aerosol the test subject shall be instructed to perform the exercises in section I. A. 14 above.

(i) Every 30 seconds the aerosol concentration shall be replenished using one half the number of squeezes as initially.

(j) The test subject shall indicate to the test conductor if at any time during the fit test the taste of saccharin is detected.

(k) If the taste of saccharin is detected, the fit is deemed unsatisfactory and a different respirator shall be tried.

4. **Irritant Fume Protocol.** (i) The respirator to be tested shall be equipped with high-efficiency particulate air (HEPA) filters.

(ii) The test subject shall be allowed to smell a weak concentration of the irritant smoke before the respirator is donned to become familiar with its characteristic odor.

(iii) Break both ends of a ventilation smoke tube containing stannic oxychloride, such as the MSA part No. 5645, or equivalent. Attach one end of the smoke tube to a low flow air pump set to deliver 200 milliliters per minute.

(iv) Advise the test subject that the smoke can be irritating to the eyes and instruct the subject to keep his/her eyes closed while the test is performed.

(v) The test conductor shall direct the stream of irritant smoke from the smoke tube towards the face seal area of the test subject. He/She shall begin at least 12 inches from the facepiece and gradually move to within one inch, moving around the whole perimeter of the mask.

(vi) The exercises identified in section I. A. 14 above shall be performed by the test subject while the respirator seal is being challenged by the smoke.

(vii) Each test subject passing the smoke test without evidence of a response shall be given a sensitivity check of the smoke from the same tube once the respirator has been removed to determine whether he/she reacts to the smoke. Failure to evoke a response shall void the fit test.

(viii) The fit test shall be performed in a location with exhaust ventilation sufficient to prevent general contamination of the testing area by the test agent.

C. Quantitative Fit Test (QNFT) Protocol

1. **General.** (i) The employer shall assign specific individuals who shall assume full responsibility for implementing the respirator quantitative fit test program.

(ii) The employer shall ensure that persons administering QNFT are able to calibrate equipment and perform tests properly, recognize invalid tests, calculate fit factors properly and assure that test equipment is in proper working order.

(iii) The employer shall assure that QNFT equipment is kept clean and well maintained so as to operate at the parameters for which it was designed.

2. **Definitions.** (i) Quantitative fit test. The test is performed in a test chamber. The normal air-purifying element of the respirator is replaced by a high-efficiency particulate air (HEPA) filter in the case of particulate QNFT aerosols or a sorbent offering contaminant penetration protection equivalent to high-efficiency filters where the QNFT test agent is a gas or vapor.

(ii) Challenge agent means the aerosol, gas or vapor introduced into a test chamber so that its concentration inside and outside the respirator may be measured.

(iii) Test subject means the person wearing the respirator for quantitative fit testing.

(iv) Normal standing position means standing erect and straight with arms down along the sides and looking straight ahead.

(v) Maximum peak penetration method means the method of determining test agent penetration in the respirator as determined by strip chart recordings of the test. The highest peak penetration for a given exercise

is taken to be representative of average penetration into the respirator for that exercise.

(vi) Average peak penetration method means the method of determining test agent penetration into the respirator utilizing a strip chart recorder, integrator, or computer. The agent penetration is determined by an average of the peak heights on the graph or by computer integration, for each exercise except the grimace exercise. Integrators or computers which calculate the actual test agent penetration into the respirator for each exercise will also be considered to meet the requirements of the average peak penetration method.

3. **Apparatus.**—(i) **Instrumentation.** Aerosol generation, dilution, and measurement systems using corn oil or sodium chloride as test aerosols shall be used for quantitative fit testing.

(ii) **Test chamber.** The test chamber shall be large enough to permit all test subjects to perform freely all required exercises without disturbing the challenge agent concentration or the measurement apparatus. The test chamber shall be equipped and constructed so that the challenge agent is effectively isolated from the ambient air, yet uniform in concentration throughout the chamber.

(iii) When testing air-purifying respirators, the normal filter or cartridge element shall be replaced with a high-efficiency particulate filter supplied by the same manufacturer.

(iv) The sampling instrument shall be selected so that a strip chart record may be made of the test showing the rise and fall of the challenge agent concentration with each inspiration and expiration at fit factors of at least 2,000. Integrators or computers which integrate the amount of test agent penetration leakage into the respirator for each exercise may be used provided a record of the readings is made.

(v) The combination of substitute air-purifying elements, challenge agent and challenge agent concentration in the test chamber shall be such that the test subject is not exposed in excess of an established exposure limit for the challenge agent at any time during the testing process.

(vi) The sampling port on the test specimen respirator shall be placed and constructed so that no leakage occurs around the port (e.g. where the respirator is probed), a free air flow is allowed into the sampling line at all times and so that there is no interference with the fit or performance of the respirator.

(vii) The test chamber and test set up shall permit the person administering the test to observe the test subject inside the chamber during the test.

(viii) The equipment generating the challenge atmosphere shall maintain the concentration of challenge agent inside the test chamber constant to within a 10 percent variation for the duration of the test.

(ix) The time lag (interval between an event and the recording of the event on the strip chart or computer or integrator) shall be kept to a minimum. There shall be a clear association between the occurrence of an event inside the test chamber and its being recorded.

(x) The sampling line tubing for the test chamber atmosphere and for the respirator

sampling port shall be of equal diameter and of the same material. The length of the two lines shall be equal.

(xi) The exhaust flow from the test chamber shall pass through a high-efficiency filter before release.

(xii) When sodium chloride aerosol is used, the relative humidity inside the test chamber shall not exceed 50 percent.

(xiii) The limitations of instrument detection shall be taken into account when determining the fit factor.

(xiv) Test respirators shall be maintained in proper working order and inspected for deficiencies such as cracks, missing valves and gaskets, etc.

4. **Procedural Requirements.** (i) When performing the initial positive or negative pressure test the sampling line shall be crimped closed in order to avoid air pressure leakage during either of these tests.

(ii) An abbreviated screening isoamyl acetate test or irritant fume test may be utilized in order to quickly identify poor fitting respirators which passed the positive and/or negative pressure test and thus reduce the amount of QNFT time. When performing a screening isoamyl acetate test, combination high-efficiency organic vapor cartridges/canisters shall be used.

(iii) A reasonably stable challenge agent concentration shall be measured in the test chamber prior to testing. For canopy or shower curtain type of test units the determination of the challenge agent stability may be established after the test subject has entered the test environment.

(iv) Immediately after the subject enters the test chamber, the challenge agent concentration inside the respirator shall be measured to ensure that the peak penetration does not exceed 5 percent for a half mask or 1 percent for a full facepiece respirator.

(v) A stable challenge concentration shall be obtained prior to the actual start of testing.

(vi) Respirator restraining straps shall not be overtightened for testing. The straps shall be adjusted by the wearer without assistance from other persons to give a reasonably comfortable fit typical of normal use.

(vii) The test shall be terminated whenever any single peak penetration exceeds 5 percent for half masks and 1 percent for full facepiece respirators. The test subject shall be refitted and retested. If two of the three required tests are terminated, the fit shall be deemed inadequate.

(viii) In order to successfully complete a QNFT, three successful fit tests are required. The results of each of the three independent fit tests must exceed the minimum fit factor needed for the class of respirator (e.g. quarter facepiece respirator, half mask respirator, full facepiece respirator) as specified in section (g) of the standard.

(ix) Calculation of fit factors.

(a) The fit factor shall be determined for the quantitative fit test by taking the ratio of the average chamber concentration to the concentration measured inside the respirator for each test exercise except the grimace exercise.

(b) The average test chamber concentration is the arithmetic average of the test chamber

concentration at the beginning and of the end of the test.

(c) The concentration of the challenge agent inside the respirator shall be determined by one of the following methods:

(1) Average peak concentration

(2) Maximum peak concentration

(3) Integration by calculation of the area under the individual peak for each exercise except the grimace exercise. This includes computerized integration.

(x) Interpretation of test results. The fit factor established by the quantitative fit testing shall be the lowest of the three fit factor values calculated from the three required fit tests.

(xi) The test subject shall not be permitted to wear a half mask, quarter facepiece, or full

facepiece respirator unless a minimum fit factor of 100 is obtained.

(xii) Filters used for quantitative fit testing shall be replaced at least weekly or whenever increased breathing resistance is encountered, or when the test agent has altered the integrity of the filter media. Organic vapor cartridges/canisters shall be replaced daily (when used) or sooner if there is any indication of breakthrough by a test agent.

II. Facepiece Seal Fit Checks—Recommended Procedures

A. *Positive pressure fit check.* Close off the exhalation valve and exhale gently into the facepiece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the facepiece without any

evidence of outward leakage of air at the seal. For most respirators this method of leak testing requires the wearer to first remove the exhalation valve cover before closing off the exhalation valve and then carefully replacing it after the test.

B. *Negative pressure fit check.* Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s) or by replacing the filter seal(s), inhale gently so that the facepiece collapses slightly, and hold the breath for ten seconds. If the facepiece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

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Federal Register

Friday
August 10, 1990

Part III

Federal Reserve System

12 CFR Parts 208 and 225

Capital Adequacy Guidelines; Minimum
Tier 1 Leverage Measure and Transition
Capital Standards; Final Rule

FEDERAL RESERVE SYSTEM**12 CFR Parts 208 and 225**

[Regulation H, Regulation Y; Docket No. R-0683]

Capital Adequacy Guidelines; Minimum Tier 1 Leverage Measure and Transition Capital Standards

AGENCY: Board of Governors of the Federal Reserve System.

ACTION: Final rule.

SUMMARY: On December 29, 1989, the Board proposed for public comment transition capital guidelines to be applied through the end of 1990, as well as guidelines for a new capital to total assets leverage ratio. The Board is now issuing in final form transition capital standards and capital leverage guidelines that are substantially similar to those proposed. The standards the Board is adopting are minimum requirements. Any institution experiencing or anticipating significant growth would be expected to maintain capital ratios, including tangible capital positions, well above the minimum levels. In all cases, banking institutions should hold capital commensurate with the level and nature of all of the risks, including the volume and severity of problem loans, to which they are exposed.

EFFECTIVE DATE: September 10, 1990.

FOR FURTHER INFORMATION CONTACT:

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SUPPLEMENTARY INFORMATION:

I. Overview and Summary

When the Board of Governors of the Federal Reserve System ("Board") issued final risk-based capital guidelines on January 19, 1989, it indicated that the existing 5.5 percent and 6 percent primary and total capital to total assets (leverage) ratios would stay in effect at least until the end of 1990, when the

interim minimum risk-based capital ratios take effect. The Board also indicated that it would consider proposing a revised leverage constraint that, if adopted, would replace the existing leverage guidelines. It was contemplated that the definition of capital for the new leverage guidelines would be consistent with the risk-based capital definition.

On December 29, 1989, the Board proposed for public comment transition capital guidelines to be applied through the end of 1990, as well as guidelines for a new leverage constraint. The comment period for the Federal Reserve's proposal ended on March 9, 1990. The Board received comments addressing various aspects of the proposal from 45 public commenters.

Based upon the comments received, and further consideration of the issues involved, the Board is now issuing in final form transition capital standards and capital leverage guidelines that are substantially similar to those proposed. The Board believes that adoption of these standards and guidelines should assist state-chartered member banks and bank holding companies (collectively, "banking organizations") in formulating their capital planning process and in strengthening their capital base.

Under the transition capital standards, a banking organization may choose up to the end of 1990 to conform to either the existing minimum capital adequacy ratios (5.5 percent primary capital and 6 percent total capital to total assets) or to the 7.25 percent year-end 1990 risk-based capital standard. The board is also establishing and applying during this period a minimum ratio of 3 percent Tier 1 capital to total assets (leverage ratio). For leverage purposes, Tier 1 is defined consistent with the year-end 1992 risk-based capital guidelines.

The existing 5.5 percent primary and 6.0 percent total capital to total assets leverage ratios will be dropped after year-end 1990. The new Tier 1 leverage ratio will then constitute the minimum capital to total assets standard for banking organizations.

The standards the Board is adopting are minimum requirements. Any institution operating at or near these levels would be expected to have well-diversified risk, including no undue interest rate risk exposure, excellent asset quality, high liquidity, good earnings and, in general, would have to be considered a strong banking organization, rated composite 1 under the appropriate bank or bank holding company rating system. Any institutions experiencing or anticipating significant

growth would be expected to maintain capital ratios, including tangible capital positions, well above the minimum levels as has been the case in the past. For example, most such banking organizations generally have operated at capital levels ranging from 100 to 200 basis points above the stated minimums. Higher capital ratios could be required if warranted by the particular circumstances or risk profiles of individual banking organizations. Thus, for all but the most highly-rated institutions meeting the conditions set forth above, the minimum Tier 1 leverage ratio is to be 3 percent plus an additional cushion of at least 100 to 200 basis points. In all cases, banking institutions should hold capital commensurate with the level and nature of all of the risks, including the volume and severity of problem loans, to which they are exposed.

Whenever appropriate, including when an organization is undertaking expansion, seeking to engage in new activities or otherwise facing unusual or abnormal risks, the Board will continue to consider the level of an organization's tangible Tier 1 leverage ratio (after deducting all intangibles) in making an overall assessment of capital adequacy. This is consistent with the Federal Reserve's risk-based capital guidelines and long-standing Board policy and practice under the current leverage guidelines. Organizations experiencing growth, whether internally or by acquisition, are expected to maintain strong capital positions substantially above minimum supervisory levels, without significant reliance on intangible assets.

II. Background

The Federal Reserve's risk-based capital guidelines adopted in January 1989 set forth an interim minimum risk-based ratio effective year-end 1990 and a final minimum risk-based standard effective year-end 1992. In issuing its risk-based capital guidelines, the Board indicated that the existing 5.5 and 6.0 percent primary and total capital to total assets (leverage) ratios would stay in effect, at least until the end of 1990. A principal reason for this was to retain a capital constraint until the interim minimum risk-based capital ratios take effect.

The Board also indicated that even after minimum risk-based capital ratios become effective, retention of an overall leverage constraint might be deemed appropriate because the risk-based capital framework does not incorporate a comprehensive measure of interest rate risk. A minimum ratio of capital to

total assets would help to address this potential problem by imposing an overall limitation on the extent to which a banking organization could leverage its equity capital base.

In addition to interest rate risk, capital ratios may also not take full or explicit account of certain other risk factors that can affect a banking organization's risk profile. These factors include funding and market risks; investment or loan portfolio concentrations; asset quality; and the adequacy of internal policies, systems, and controls. These factors, which must be taken into account in determining the overall risk profile and capital adequacy of a banking organization, also suggest the need to encourage banking organizations to operate well above minimum supervisory ratios.

In issuing its risk-based capital guidelines, the Board indicated that retention of the existing leverage ratios would provide an element of stability during the risk-based capital transition period. The Board further stated that if retention of an overall leverage standard were deemed appropriate in the long-run, the Federal Reserve would consider replacing the existing primary and total capital to total assets leverage ratios with a standard that incorporates a definition of capital that is consistent with the definitions contained in the risk-based capital framework. At the time, the Board indicated that a leverage standard based upon a revised definition of capital, and used in conjunction with a strong risk-based capital requirement, could be set at a level different from the existing leverage standard it would replace.

On December 29, 1989, the Board accordingly proposed for public comment transition capital standards to be applied to state member banks and bank holding companies through the end of 1990, as well as guidelines for a new leverage constraint to be applied to banking organizations, which, if adopted, would replace the existing leverage guidelines. The comment period for the proposal ended March 9, 1990. The Board received comments from 45 public respondents that addressed various aspects of the proposal.¹

Over 80 percent of the 39 respondents that addressed the proposed leverage guidelines supported the concept of a leverage constraint, although a number had reservations on particular details of

the Board's proposed leverage guidelines. Among the issues commenters raised in connection with the leverage constraint was its relationship to banking organizations' CAMEL/BOPEC ratings, the primacy of the risk-based measure, and the definition of capital.

Only nine commenters discussed the Board's proposed transition capital standards. All agreed that the proposal to permit banking organizations a choice of conforming to either the existing minimum capital adequacy ratios or the 7.25 percent year-end 1990 risk-based capital standard would be beneficial.

Based on the comments received and further consideration of the issues involved, the Board is now issuing in final form transition capital guidelines to be applied through the end of 1990, as well as guidelines for a new minimum capital to total assets ratio which will replace the existing leverage guidelines at the end of 1990. These guidelines are substantially similar to those proposed. Taken together, the standards the Board is adopting should assist banking organizations in their capital planning process and, where necessary, their efforts to raise additional capital and strengthen their capital base.

III. Transition and Leverage Standards

A. Transition Standards

The Board proposed transition capital standards to apply during the first phase of the risk-based capital transition period, which ends at year-end 1990. All respondents that commented on this issue endorsed the standards. Accordingly, the Board is issuing the transition capital standards in the form proposed.

Under the adopted transition capital standards, a banking organization may conform to either the existing minimum capital adequacy ratios of 5.5 percent primary capital and 6 percent total capital to total assets, or to the 7.25 percent year-end 1990 minimum risk-based capital standard. It should be emphasized that banking organizations are not required to meet the interim risk-based standard prior to its year-end 1990 effective date. Rather, organizations have the option of complying with the risk-based standard during 1990, in lieu of meeting the existing primary and total capital adequacy guidelines. Regardless of which of these options is chosen during this period banking organizations would also have to meet the new proposed leverage standard set forth below.

B. New Leverage Standard

The Board also proposed to establish and apply during 1990 and thereafter a minimum Tier 1 capital to total assets (leverage) ratio of 3 percent. The 3 percent Tier 1 to total assets ratio would be a minimum for the top-rated banking organizations without any supervisory, financial or operational weaknesses or deficiencies. Other organizations would be expected to maintain capital ratios of at least 100 to 200 basis points above the minimum depending on their financial condition. The Board also proposed that at the end of 1990, the Tier 1 leverage ratio would replace the existing 5.5 percent and 6.0 percent primary and total capital to total assets leverage ratios.

The vast majority of commenters, while supporting the use of a leverage constraint, expressed the view that the risk-based capital ratio should serve as the primary measure of an organization's capital adequacy. Commenters were divided on the issue of what would constitute an acceptable minimum level of Tier 1 capital to total assets. Some stated that any minimum over 3 percent would be unduly burdensome and undermine risk-based capital, while others expressed concern that the proposed 3 percent minimum was too low and could lead to an erosion of capital levels. A few respondents endorsed the Board's proposed approach of setting a 3 percent minimum ratio for top-rated organizations and requiring higher capital levels for other organizations because it offered flexibility and placed what they viewed as appropriate reliance on the examination process. A number of commenters, however, stated their concerns that this approach could result in an uneven or inconsistent application of capital standards across organizations and could lead to uncertainty in the capital planning process.

After reviewing the comments received and further considering the issues involved, the Board is adopting its proposal to establish a minimum Tier 1 capital to total assets ratio. This leverage constraint will be used as a supplement to the risk-based capital measure. The Board is also adopting its proposal that the minimum Tier 1 ratio only apply to top-rated organizations without any operating, financial or supervisory deficiencies. Other organizations will be expected to hold an additional capital cushion of at least 100 to 200 basis points, based on their particular circumstances and risk profiles. In the Board's view, this

¹ A summary of the comments received is contained in a memorandum distributed at the Federal Reserve's June 20, 1990 public meeting, at which the board adopted the transition capital standards and leverage guidelines.

approach strikes a reasonable balance between the need to set a floor that is not so high as to undermine the risk-based capital standard, and the need to provide for an adequate limitation on leverage.

The Board proposed that the definition of Tier 1 capital for leverage purposes be consistent with the year-end 1992 risk-based capital definition. A number of commenters endorsed the use of consistent definitions because, in their view, it would minimize confusion and simplify the capital planning process. Some commenters approved the use of Tier 1 capital in the leverage ratio specifically because it would establish an equity standard. A small minority, however, stated their preference for a definition of capital for leverage purposes that would include non-Tier 1 elements such as the allowance for loan and lease losses.

The Board is accordingly adopting its proposal that the leverage standard employ the year-end 1992 definition of Tier 1 capital, as set forth in the risk-based capital guidelines,² and exclude any non-Tier 1 elements from its definition of capital. Total assets is defined for this purpose as total consolidated assets (defined net of the allowance for loan and lease losses), less goodwill and, on a case-by-case basis, any other intangible assets or investments in subsidiaries that the primary regulator determines should be deducted from Tier 1 capital.

As proposed, at the end of 1990 the Board will drop the existing leverage ratios, that is, the 5.5 percent and 6.0 percent primary and total capital to total assets leverage ratios. The new Tier 1 capital to total assets ratio will then constitute the leverage standard for banking organizations, and will be used

thereafter to supplement the risk-based ratio in determining the overall capital adequacy of banking organizations.

The new Tier 1 leverage ratio differs in a number of respects from the current primary and total capital ratios as defined under the Federal Reserve's existing leverage guidelines. For example, primary capital includes the allowance for loan and lease losses (without limitation), and total capital includes limited amounts of subordinated debt. Neither of these elements, both of which are deemed to be Tier 2 components under the risk-based capital framework, is included in the definition of capital for the new Tier 1 leverage ratio. Moreover, the current primary and total capital leverage standards do not contain an absolute minimum for the level of permanent shareholders' equity in relation to assets—a minimum that is established by the Tier 1 leverage standard. Thus, the new Tier 1 leverage ratio reflects the amount of core equity that is available to support unanticipated losses—a key prudential measure for determining the health of individual banking organizations. In addition to these benefits, adoption of Tier 1 for the purpose of comparing capital to total assets will have the advantage of bringing the definition of capital for leverage purposes into line with the definition of capital for risk-based capital purposes.

The Board emphasizes that in all cases, the standards set forth above are supervisory minimums. An institution operating at or near these levels is expected to have well-diversified risk, including no undue interest rate risk exposure; excellent asset quality; high liquidity; good earnings; and in general be considered a strong banking organization, rated composite 1 under the CAMEL rating system for banks or the BOPEC rating system for bank holding companies. Institutions with high or inordinate levels of risk are expected to operate well above minimum capital standards. As has been the case in the past, institutions experiencing or anticipating significant growth are also expected to maintain capital ratios, including tangible capital positions, well above the minimum levels. For example, most such banking organizations generally have operated at capital levels ranging from 100 to 200 basis points above the stated minimums. Higher capital ratios could be required if warranted by the particular circumstances or risk profiles of individual banking organizations. Thus, for all but the most highly-rated institutions meeting the conditions set

forth above, the minimum Tier 1 leverage ratio is to be 3 percent plus an additional cushion of at least 100 to 200 basis points. In all cases, banking institutions should hold capital commensurate with the level and nature of all of the risks, including the volume and severity of problem loans, to which they are exposed.

Whenever appropriate, including when an organization is undertaking expansion, seeking to engage in new activities or otherwise facing unusual or abnormal risks, the Board will continue to consider the level of an organization's tangible Tier 1 leverage ratio (after deducting all intangibles) in making an overall assessment of capital adequacy. This is consistent with the Federal Reserve's risk-based capital guidelines and long-standing Board policy and practice under the current leverage guidelines. Organizations experiencing growth, whether internally or by acquisition, are expected to maintain strong capital positions substantially above minimum supervisory levels, without significant reliance on intangible assets.

IV. Regulatory Flexibility Act Analysis

The Federal Reserve Board certifies that adoption of this proposal would not have a significant economic impact on a substantial number of small business entities (in this case, small banking organizations), in accord with the spirit and purposes of the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). In addition, consistent with current policy, these guidelines generally will not apply on a consolidated basis to bank holding companies with consolidated assets of less than \$150 million. Moreover, rather than requiring all banking organizations to raise additional capital, the guidelines are directed by institutions whose capital positions are less than fully adequate in relation to their risk and leverage profiles.

List of Subjects

12 CFR Part 208

Accounting, Agricultural loan losses, Applications, Appraisals, Banks, Banking, Branches, Capital adequacy, Confidential business information, Dividend payments, Federal Reserve System, Flood insurance, Publication of reports of condition, Reporting and recordkeeping requirements, Securities, State member banks.

12 CFR Part 225

Administrative practice and procedure, Appraisals, Banks, Banking, Capital adequacy, Federal Reserve System, Holding companies, Reporting

² At the end of 1992, Tier 1 capital for state member banks includes common equity, minority interests in equity accounts of consolidated subsidiaries, and qualifying noncumulative perpetual preferred stock, less goodwill. It excludes any other intangible assets and investments in subsidiaries that the Federal Reserve determines should be deducted from capital for supervisory purposes. This could be done on a case-by-case basis or for certain classes of intangible assets. For bank holding companies, Tier 1 capital at the end of 1992 includes common equity, minority interests in equity accounts of consolidated subsidiaries, and qualifying perpetual preferred stock. (Perpetual preferred stock is limited to 25 percent of Tier 1 capital.) In addition, Tier 1 excludes goodwill, and other intangibles and investments in subsidiaries that the primary regulator determines should be deducted from capital. Such deductions could be done on a case-by-case basis or for certain classes of intangible assets. (This summary of Tier 1 capital definitions is purely illustrative in nature. Comprehensive Tier 1 capital definitions are set forth in Appendix A to part 208 of the Board's Regulation H for state member banks and in Appendix A to part 225 of the Board's Regulation Y for bank holding companies.)

and recordkeeping requirements, Securities, State member banks.

For the reasons set forth in this document, and pursuant to the Board's authority under section 5(b) of the Bank Holding Company Act of 1956 (12 U.S.C. 1844(b)), and section 910 of the International Lending Supervision Act of 1983 (12 U.S.C. 3909), the Board amends 12 CFR parts 208 and 225 as follows:

PART 208—MEMBERSHIP OF STATE BANKING INSTITUTIONS IN THE FEDERAL RESERVE SYSTEM

1. The authority citation for part 208 continues to read as follows:

Authority: Sections 9, 11(a), 11(c), 19, 21, 25, and 25(a) of the Federal Reserve Act, as amended (12 U.S.C. 321-338, 248(a), 248(c), 461, 481-486, 601, and 611, respectively); sections 4 and 13(j) of the Federal Deposit Insurance Act, as amended (12 U.S.C. 1814 and 1823(j), respectively); section 7(a) of the International Banking Act of 1978 (12 U.S.C. 3105); sections 907-910 of the International Lending Supervision Act of 1983 (12 U.S.C. 3906-3909); sections 2, 12(b), 12(g), 12(i), 15B(c)(5), 17, 17A, and 23 of the Securities Exchange Act of 1934 (15 U.S.C. 78b, 78/(b), 78/(g), 78/(i), 78o-4(c)(5), 78q, 78q-1, and 78w, respectively); section 5155 of the Revised Statutes (12 U.S.C. 36) as amended by the McFadden Act of 1927; and sections 1101-1122 of the Financial Institutions Reform, Recovery and Enforcement Act of 1989 (12 U.S.C. 3310 and 3331-3351).

2. Section 208.13 is revised to read as follows:

§ 208.13 Capital adequacy.

The standards and guidelines by which the capital adequacy of state member banks will be evaluated by the Board are set forth in appendix A to part 208 for risk-based capital purposes, and, with respect to the ratios relating capital to total assets, in appendix B to part 208 and in appendix B to the Board's Regulation Y, 12 CFR part 225.

Appendix A—[Amended]

3. Footnote 1 to "I. Overview" of appendix A to part 208 is revised to read as follows:

¹ Supervisory ratios that relate capital to total assets for state member banks are outlined in Appendix B of this Part and in appendix B to part 225 of the Federal Reserve's Regulation Y, 12 CFR Part 225.

4. The last sentence of the first paragraph to "IV. Minimum Supervisory Ratios and Standards" of appendix A to part 208 is removed; the existing second paragraph now becomes the third paragraph and remains unchanged; and a new paragraph is added immediately following the first paragraph. The new second paragraph reads as follows:

Institutions with high or inordinate levels of risk are expected to operate well above minimum capital standards. Banks experiencing or anticipating significant growth are also expected to maintain capital, including tangible capital positions, well above the minimum levels. For example, most such institutions generally have operated at capital levels ranging from 100 to 200 basis points above the stated minimums. Higher capital ratios could be required if warranted by the particular circumstances or risk profiles of individual banks. In all cases, banks should hold capital commensurate with the level and nature of all of the risks, including the volume and severity of problem loans, to which they are exposed.

5. A second paragraph is added to "IV. B. Transition Arrangements" of Appendix A to Part 208 to read as follows:

Through year-end 1990, banks have the option of complying with the minimum 7.25 percent year-end 1990 risk-based capital standard, in lieu of the minimum 5.5 percent primary and 6 percent total capital to total assets capital ratios set forth in appendix B to part 225 of the Federal Reserve's Regulation Y. In addition, as more fully set forth in appendix B to this part, banks are expected to maintain a minimum ratio of Tier 1 capital total assets during this transition period.

6. Appendix B is added to part 208 to read as set forth below.

Appendix B To Part 208: Capital Adequacy Guidelines for State Member Banks: Tier 1 Leverage Measure

I. Overview

The Board of Governors of the Federal Reserve System has adopted a minimum ratio to Tier 1 capital to total assets to assist in the assessment of the capital adequacy of state member banks.¹ The principal objective of this measure is to place a constraint on the maximum degree to which a state member bank can leverage its equity capital base. It is intended to be used as a supplement to the risk-based capital measure.

The guidelines apply to all state member banks on a consolidated basis and are to be used in the examination and supervisory process as well as in the analysis of applications acted upon by the Federal Reserve. The Board will review the guidelines from time to time and will consider the need for possible adjustments in light of any significant changes in the economy, financial markets, and banking practices.

II. The Tier 1 Leverage Ratio

The Board has established a minimum level of Tier 1 capital to total assets of 3 percent. An institution operating at or near these levels is expected to have well-diversified risk, including no undue interest rate risk exposure; excellent asset quality; high liquidity; good earnings; and in general be considered a strong banking organization.

¹ Supervisory risk-based capital ratios that relate capital to weighted risk assets for state member banks are outlined in Appendix A to this Part.

rated composite 1 under the CAMEL rating system of banks. Institutions not meeting these characteristics, as well as institutions with supervisory, financial, or operational weaknesses, are expected to operate well above minimum capital standards.

Institutions experiencing or anticipating significant growth also are expected to maintain capital ratios, including tangible capital positions, well above the minimum levels. For example, most such banks generally have operated at capital levels ranging from 100 to 200 basis points above the stated minimums. Higher capital ratios could be required if warranted by the particular circumstances or risk profiles of individual banks. Thus, for all but the most highly-rated banks meeting the conditions set forth above, the minimum Tier 1 leverage ratio is to be 3 percent plus an additional cushion of at least 100 to 200 basis points. In all cases, banking institutions should hold capital commensurate with the level and nature of all risks, including the volume and severity of problem loans, to which they are exposed.

A bank's Tier 1 leverage ratio is calculated by dividing its Tier 1 capital (the numerator of the ratio) by its average total consolidated assets (the denominator of the ratio). The ratio will also be calculated using period-end assets whenever necessary, on a case-by-case basis. For the purpose of this leverage ratio, the definition of Tier 1 capital for year-end 1992 as set forth in the risk-based capital guidelines contained in appendix A of this part will be used.² Average total consolidated assets are defined as the quarterly average total assets (defined net of the allowance for loan and lease losses) reported on the bank's Reports of Condition and Income ("Call Report"), less goodwill and any other intangible assets and investments in subsidiaries that the Federal Reserve determines should be deducted from Tier 1 capital.³

Whenever appropriate, including when a bank is undertaking expansion, seeking to engage in new activities or otherwise facing unusual or abnormal risks, the Board will continue to consider the level of an individual bank's tangible Tier 1 leverage ratio (after deducting all intangibles) in making an overall assessment of capital adequacy. This is consistent with the Federal Reserve's risk-based capital guidelines and long-standing Board policy and practice with regard to leverage guidelines. Banks experiencing growth, whether internally or by acquisition, are expected to maintain strong capital positions substantially above minimum supervisory levels, without significant reliance on intangible assets.

² At the end of 1992, Tier 1 capital for state member banks includes common equity, minority interests in equity accounts of consolidated subsidiaries, and qualifying noncumulative perpetual preferred stock, less goodwill. The Federal Reserve may exclude certain other intangibles and investments in subsidiaries as appropriate.

³ Deductions from Tier 1 capital and other adjustments are discussed more fully in section II.B. of appendix A to this part.

PART 225—BANK HOLDING COMPANIES AND CHANGE IN BANK CONTROL

1. The authority citation for part 225 continues to read as follows:

Authority: 12 U.S.C. 1817(j)(13); 1818, 1831i, 1843(c)(8), 1844(b), 3106, 3108, 3907, 3909, 3310, and 3331-3351.

Appendix A—[Amended]

2. Footnote 1 to "I. Overview" of appendix A to part 225 is revised to read as follows:

¹ Supervisory ratios that relate capital to total assets for bank holding companies are outlined in appendices B and D of this part.

3. The last sentence of the first paragraph to "IV. Minimum Supervisory Ratios and Standards" of appendix A to part 225 is removed; the existing second paragraph now becomes the third paragraph and remains unchanged; and a new paragraph is added immediately following the first paragraph. The new second paragraph reads as follows:

Institutions with high or inordinate levels of risk are expected to operate well above minimum capital standards. Banking organizations experiencing or anticipating significant growth are also expected to maintain capital, including tangible capital positions, well above the minimum levels. For example, most such organizations generally have operated at capital levels ranging from 100 to 200 basis points above the stated minimums. Higher capital ratios could be required if warranted by the particular circumstances or risk profiles of individual banking organizations. In all cases, organizations should hold capital commensurate with the level and nature of all of the risks, including the volume and severity of problem loans, to which they are exposed.

4. A second paragraph is added to "IV. B. Transition Arrangements" of appendix A to part 225 to read as follows:

Through year-end 1990, banking organizations have the option of complying with the minimum 7.25 percent year-end 1990 risk-based capital standard, in lieu of the minimum 5.5 percent primary and 6 percent total capital to total assets ratios set forth in appendix B of this Part. In addition, as more fully set forth in appendix D to this part, banking organizations are expected to maintain a minimum ratio of Tier 1 capital to total assets during this transition period.

Appendix B—[Amended]

5. Three new sentences are added to the end of the first paragraph of appendix B to part 225 to read as follows:

* * * In this regard, the Board has determined that during the transition period through year-end 1990 for implementation of the risk-based capital guidelines contained in

appendix A to this part and in appendix A to part 208, a banking organization may choose to fulfill the requirements of the guidelines relating capital to total assets contained in this Appendix in one of two manners. Until year-end 1990, a banking organization may choose to conform to either the 5.5 percent and 6 percent minimum primary and total capital standards set forth in this Appendix, or the 7.25 percent year-end 1990 minimum risk-based capital standard set forth in appendix A to this part and appendix A to part 208. Those organizations that choose to conform during this period to the 7.25 percent year-end 1990 risk-based capital standard will be deemed to be in compliance with the capital adequacy guidelines set forth in this appendix.

6. Appendix D is added to part 225 to read as set forth below.

Appendix D—Capital Adequacy Guidelines for Bank Holding Companies: Tier 1 Leverage Measure

I. Overview

The Board of Governors of the Federal Reserve System has adopted a minimum ratio of Tier 1 capital to total assets to assist in the assessment of the capital adequacy of bank holding companies ("banking organizations").¹ The principal objective of this measure is to place a constraint on the maximum degree to which a banking organization can leverage its equity capital base. It is intended to be used as a supplement to the risk-based capital measure.

The guidelines apply on a consolidated basis to bank holding companies with consolidated assets of \$150 million or more. For bank holding companies with less than \$150 million in consolidated assets, the guidelines will be applied on a bank-only basis unless: a) the parent bank holding company is engaged in nonbank activity involving significant leverage; or b) the parent company has a significant amount of outstanding debt that is held by the general public.

The Tier 1 leverage guidelines are to be used in the inspection and supervisory process as well as in the analysis of applications acted upon by the Federal Reserve. The Board will review the guidelines from time to time and will consider the need for possible adjustments in light of any significant changes in the economy, financial markets, and banking practices.

II. The Tier 1 Leverage Ratio

The Board has established a minimum level of Tier 1 capital to total assets of 3 percent. A banking organization operating at or near these levels is expected to have well-diversified risk, including no undue interest rate risk exposure; excellent asset quality; high liquidity; good earnings; and in general be considered a strong banking organization.

¹ Supervisory risk-based capital ratios that relate capital to weighted risk assets for bank holding companies are outlined in Appendix A to this Part.

² A parent company that is engaged in significant off-balance sheet activities would generally be deemed to be engaged in activities that involve significant leverage.

rated composite 1 under the BOPEC rating system for bank holding companies. Organizations not meeting these characteristics, as well as institutions with supervisory, financial, or operational weaknesses, are expected to operate well above minimum capital standards. Organizations experiencing or anticipating significant growth also are expected to maintain capital ratios, including tangible capital positions, well above the minimum levels. For example, most such organizations generally have operated at capital levels ranging from 100 to 200 basis points above the stated minimums. Higher capital ratios could be required if warranted by the particular circumstances or risk profiles of individual banking organizations. Thus, for all but the most highly-rated organizations meeting the conditions set forth above, the minimum Tier 1 leverage ratio is to be 3 percent plus an additional cushion of at least 100 to 200 basis points. In all cases, banking organizations should hold capital commensurate with the level and nature of all risks, including the volume and severity of problem loans, to which they are exposed.

A banking organization's Tier 1 leverage ratio is calculated by dividing its Tier 1 capital (the numerator of the ratio) by its average total consolidated assets (the denominator of the ratio). The ratio will also be calculated on the basis of period-end assets, whenever necessary on a case-by-case basis. For the purpose of this leverage ratio, the definition of Tier 1 capital for year-end 1992 as set forth in the risk-based capital guidelines contained in appendix A to this part will be used.³ Average total consolidated assets are defined as the quarterly average total assets (defined net of the allowance for loan and lease losses) reported on the banking organization's Consolidated Financial Statements ("FR Y-9C Report"), less goodwill and any other intangible assets or investments in subsidiaries that the Federal Reserve determines should be deducted from Tier 1 capital.⁴

Whenever appropriate, including when an organization is undertaking expansion, seeking to engage in new activities or otherwise facing unusual or abnormal risks, the Board will continue to consider the level of an individual organization's tangible Tier 1 leverage ratio (after deducting all intangibles) in making an overall assessment of capital adequacy. This is consistent with the Federal Reserve's risk-based capital guidelines and long-standing Board policy and practice with regard to leverage guidelines. Organizations experiencing growth, whether internally or by acquisition, are expected to maintain strong

³ At the end of 1992, Tier 1 capital for bank holding companies includes common equity, minority interests in equity accounts of consolidated subsidiaries, and qualifying perpetual preferred stock. (Perpetual preferred stock is limited to 25 percent of Tier 1 capital.) In addition, Tier 1 excludes goodwill. The Federal Reserve may exclude certain other intangibles and investments in subsidiaries as appropriate.

⁴ Deductions from Tier 1 capital and other adjustments are discussed more fully in section II.B. of Appendix A to this Part.

capital positions substantially above minimum supervisory levels, without significant reliance on intangible assets.

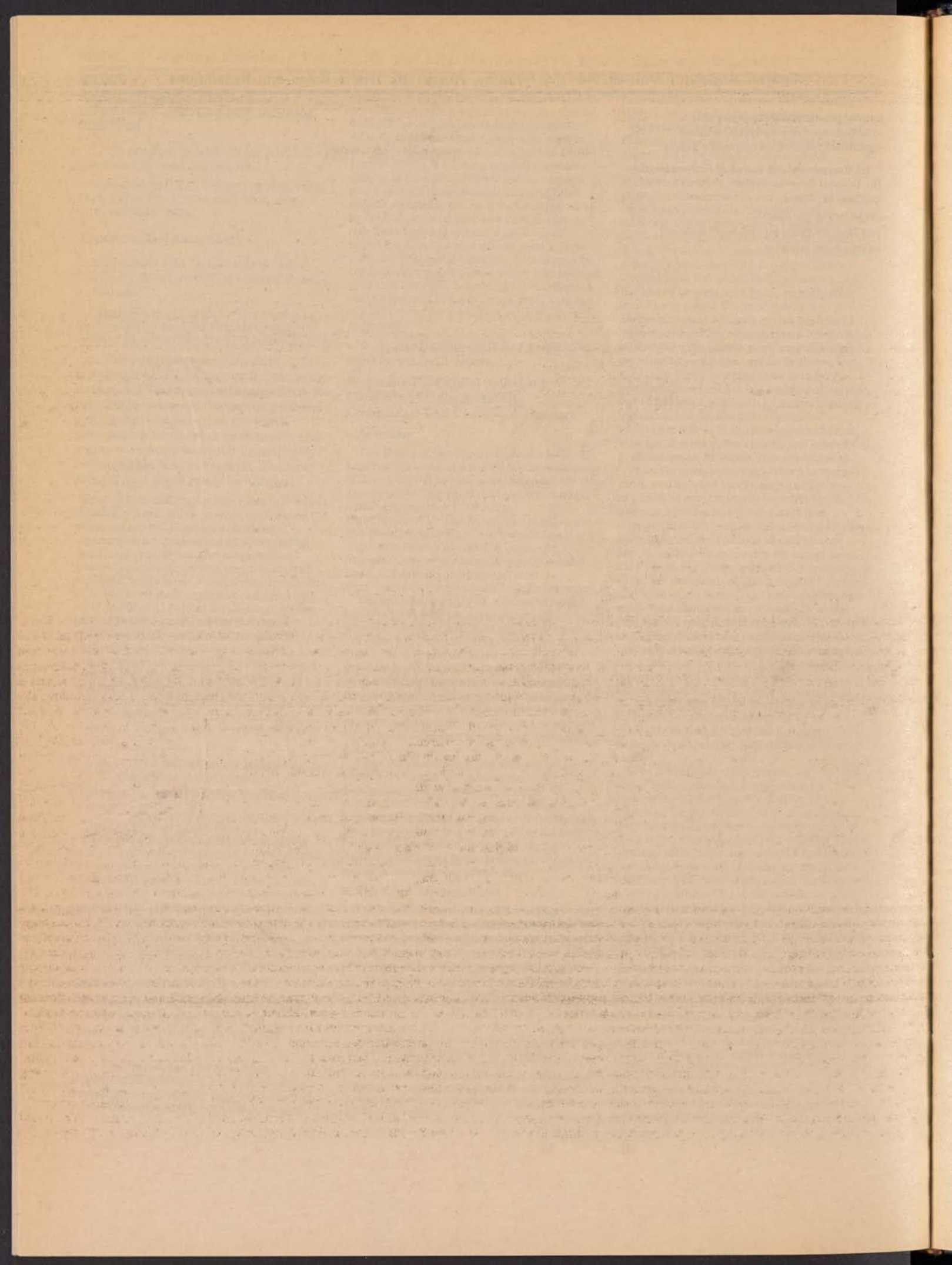
By the order of the Board of Governors of the Federal Reserve System, August 1, 1990.

William W. Wiles,

Secretary of the Board.

[FR Doc. 90-18404 Filed 8-9-90; 8:45 am]

BILLING CODE 6210-01-M



29 CFR Part 2585 Federal Register

Friday
August 10, 1990

Part IV

Department of Labor

Pension and Welfare Benefits

29 CFR Parts 2570 and 2585
Prohibited Transaction Exemption
Procedures; Employee Benefit Plans;
Final Regulation and Removal of Interim
Final Regulation

DEPARTMENT OF LABOR

Pension and Welfare Benefits
Administration

29 CFR Parts 2570 and 2585

RIN 1210-AA26

Prohibited Transaction Exemption
Procedures; Employee Benefit Plans**AGENCY:** Pension and Welfare Benefits
Administration, Labor.**ACTION:** Final regulation and removal of
interim final regulation.

SUMMARY: This document contains a final regulation that describes the procedures for filing and processing applications for exemptions from the prohibited transaction provisions of the Employee Retirement Income Security Act of 1974 (ERISA), the Internal Revenue Code of 1986 (the Code), and the Federal Employees' Retirement System Act of 1986 (FERSA). At this time, the Department is also removing an interim regulation which describes the exemption procedures under FERSA because such regulation is superseded by the final regulation contained herein. The Secretary of Labor is authorized to grant exemptions from the prohibited transaction provisions of ERISA, the Code, and FERSA and to establish an exemption procedure to provide for such exemptions. The final regulation updates the description of the Department of Labor's procedures to reflect changes in the Department's exemption authority and to clarify the procedures by providing a more comprehensive description of the prohibited transaction exemption process.

EFFECTIVE DATE: This regulation is effective September 10, 1990, and applies to all exemption applications filed at any time on or after that date.

FOR FURTHER INFORMATION CONTACT: Miriam Freund, Office of Exemption Determinations, Pension and Welfare Benefits Administration, U.S. Department of Labor, Washington, DC 20210, (202) 523-8194, or Susan Rees, Plan Benefits Security Division, Office of the Solicitor, U.S. Department of Labor, Washington, DC 20210, (202) 523-9141.

SUPPLEMENTARY INFORMATION: Public reporting burden for this collection of information is estimated to average 28.5 hours per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any

other aspect of this collection of information, including suggestions for reducing the burden, to Director, Office of Information Management, U.S. Department of Labor, 200 Constitution Avenue NW., Room N-1301, Washington, DC 20210; and to the Office of Information and Regulatory Affairs, Attn: OMB Desk Officer for PWBA, Office of Management and Budget, Room 3001, Washington, DC 20503.

Section 406 of ERISA prohibits certain transactions between employee benefit plans and "parties in interest" (as defined in section 3(14) of ERISA). In addition, sections 406 and 407(a) of ERISA impose restrictions on plan investments in "employer securities" (as defined in section 407(d)(1) of ERISA) and "employer real property" (as defined in section 407(d)(2) of ERISA). Most of the transactions prohibited by section 406 of ERISA are likewise prohibited by section 4975 of the Code, which imposes an excise tax on those transactions to be paid by each "disqualified person" (defined in section 4975(e)(2) of the Code in virtually the same manner as the term "party in interest") who participates in the transactions.

Both ERISA and the Code contain various statutory exemptions from the prohibited transaction rules. In addition, section 408(a) of ERISA authorizes the Secretary of Labor to grant administrative exemptions from the restrictions of ERISA sections 406 and 407(a) while section 4975(c)(2) of the Code authorizes the Secretary of the Treasury or his delegate to grant exemptions from the prohibitions of Code section 4975(c)(1). Sections 408(a) of ERISA and 4975(c)(2) of the Code direct the Secretary of Labor and the Secretary of the Treasury, respectively, to establish procedures to carry out the purposes of these sections.

Under section 3003(b) of ERISA, the Secretary of Labor and the Secretary of the Treasury are directed to consult and coordinate with each other with respect to the establishment of rules applicable to the granting of exemptions from the prohibited transaction restrictions of ERISA and the Code. Under section 3004 of ERISA, moreover, the Secretaries are authorized to develop jointly rules appropriate for the efficient administration of ERISA. Pursuant to these provisions, the Secretaries jointly issued an exemption procedure on April 28, 1975 (ERISA Proc. 75-1, 40 FR 18471, also issued as Rev. Proc. 75-26, 1975-1 C.B. 722). Under these procedures, a person seeking an exemption under both section 408(a) of ERISA and section 4975(c)(2) of the Code was obliged to file an exemption application with the

Internal Revenue Service as well as with the Department of Labor.

Reorganization Plan No. 4 of 1978 (43 FR 47713, October 17, 1978, effective on December 31, 1978), transferred the authority of the Secretary of the Treasury to issue exemptions under section 4975 of the Code, with certain enumerated exceptions, to the Secretary of Labor. As a result, the Secretary of Labor now possesses authority under section 4975(c)(2) of the Code, as well as under section 408(a) of ERISA, to issue individual and class exemptions from the prohibited transaction rules of ERISA and the Code. The Secretary has delegated this authority, along with most of his other responsibilities under ERISA, to the Assistant Secretary for Pension and Welfare Benefits. See Secretary of Labor's Order 1-87, 52 FR 13139 (April 21, 1987).

FERSA also contains prohibited transaction rules that are applicable to parties in interest with respect to the Federal Thrift Savings Fund established by FERSA, and the Secretary of Labor is directed to prescribe, by regulation, a procedure for granting administrative exemptions from certain of those prohibited transactions. See 5 U.S.C. 8477(c)(3).

On June 28, 1988, the Department published a proposed rule in the *Federal Register* (53 FR 24422) updating ERISA Procedure 75-1 to reflect the changes made by Reorganization Plan No. 4 and extending the procedure to applications for exemptions from the FERSA prohibited transaction rules. In addition, the proposed regulation codified various procedures developed by PWBA since the adoption of ERISA Proc. 75-1. Formal adoption of those procedures will facilitate review of exemption applications. These new procedures also fill in some of the gaps left in ERISA Proc. 75-1, thereby providing a more detailed description both of the steps to be taken by applicants in applying for exemptions and the steps normally taken by the Department in processing such applications. Finally, the proposed regulation modified some of the procedures described in ERISA Proc. 75-1 to better serve the needs of the administrative exemption program as demonstrated by the Department's experience with the program over the previous fourteen years. These amendments were intended to promote the prompt and fair consideration of all exemption applications.

The notice of proposed rulemaking gave interested persons an opportunity to comment on the proposal. In response, the Department received three letters of comment regarding several

aspects of the proposed regulation. The following discussion summarizes the proposed regulation and the issues raised by the commentators and explains the Department's reasons for adopting the provisions of the final regulation.

The Scope of the Regulation

As explained in the notice of proposed rulemaking, the regulation establishes new procedures to replace ERISA Proc. 75-1. These new procedures reflect changes in the Department of Labor's exemption authority effected by Reorganization Plan No. 4 of 1978. Thus, the procedures apply to all applications for exemption which the Department has authority to issue under section 408(a) of ERISA, or, as a result of Reorganization Plan No. 4, under section 4975(c)(2) of the Code. The procedures reflect current practice under which the Department generally treats any exemption application filed solely under section 408(a) of ERISA or solely under section 4975(c)(2) of the Code as an application for exemption filed under both of these sections if the application relates to a transaction prohibited under corresponding provisions of both ERISA and the Code. The grant of an exemption by the Department in such instances protects disqualified persons covered by the exemption from the excise taxes otherwise assessable under section 4975 (a) and (b) of the Code.

However, the procedures do not apply to applications for exemption reserved to the jurisdiction of the Secretary of the Treasury by Reorganization Plan No. 4. To ascertain the correct procedures for filing and processing applications for these exemptions, applicants should consult the Internal Revenue Service.

The Department has also concluded that it is appropriate to apply the procedures provided here to exemption applications filed under FERSA, as well as those filed under ERISA or the Code, as provided by proposed § 2570.30, which has been adopted without change in the final regulation. Although the prohibited transaction provisions of FERSA and the scope of the Department's exemptive authority under FERSA differ somewhat from that under ERISA and the Code, administrative exemption matters under FERSA are likely to involve many of the same issues as are presented by similar matters involving private plans. Thus, adopting uniform procedures should help assure uniform administration of the exemption programs.

Applications for Exemption under FERSA

On December 29, 1988, the Department published an interim regulation in the *Federal Register* (29 CFR part 2585, 53 FR 52688) describing the procedures for filing and processing applications for exemptions from the prohibited transaction provisions of FERSA. For such applications, the interim regulation adopted the procedures then currently followed (pursuant to ERISA Proc. 75-1) by applicants for exemptions from the prohibited transaction provisions of ERISA and the Code. The interim final regulation was effective commencing December 29, 1988 until the effective date of the final regulation contained herein for all prohibited transaction exemption applications (under ERISA, the Code, and FERSA).¹

Section 2585.12 of the interim regulation provides that this regulation shall expire on the effective date of the revised prohibited transaction exemption procedure, published in proposed form on June 28, 1988, 53 FR 24422, and that the Department will publish a document removing these interim regulations when it adopts final regulations based on the published proposal. Accordingly, this notice of final rulemaking removes the interim regulations as of September 10, 1990, the effective date of the final regulation contained herein.

In regard to FERSA exemption applications, the Department received a comment relating to the adoption of ERISA class exemptions for FERSA purposes. This comment suggested that the final regulation clarify that the Department will follow the procedure authorized under section 8477(c)(3)(E) of FERSA, which permits the Secretary of Labor to determine that an exemption granted for any class of fiduciaries or transactions under section 408(a) of ERISA shall constitute an exemption for FERSA purposes upon publication of notice in the *Federal Register* without affording interested persons opportunities to present their views (in writing or at a hearing).

The procedure described in the preceding paragraph was not used in conjunction with the Department's adoption for FERSA purposes of a number of specific class exemptions under ERISA (i.e., Prohibited

Transaction Exemptions (PTE) 75-1, 78-19, 80-26, 80-51, 82-63, and 86-128). In that instance, the Department published in the *Federal Register* both a notice of proposed adoption of class exemptions under ERISA (53 FR 38105, September 29, 1988), which invited the public to submit written comments or requests for a hearing on the proposed adoption, and also a notice of final adoption of these class exemptions (PTE T88-1, 53 FR 52838, December 29, 1988). In this regard, the Department notes that, with respect to ERISA class exemptions which may be proposed in the future and which may also be relevant under FERSA, the Department will solicit the views of the Executive Director of the Federal Retirement Thrift Investment Board in advance of the publication of the proposed exemption to determine whether such exemption should also be proposed for FERSA purposes.

Also regarding FERSA exemption applications, the Department received another comment requesting clarification that the mere existence of routine audit activity conducted by the Department pursuant to the requirements of section 8477(g) of FERSA² will not provide a basis for denial of, or failure to consider, an application for exemption under FERSA. It is the view of the Department that those audits conducted by the Department in carrying out its responsibilities in connection with its regular program of compliance audits under FERSA section 8477(g) would not constitute an "investigation" for purposes of §§ 2570.33(a)(2) and 2570.37(b) of the regulation³ or an "examination" for purposes of § 2570.35(a)(7).⁴ The Department would

² Section 8477(g) of FERSA requires the Secretary of Labor to establish a program to carry out audits to determine the level of compliance with the requirements of this section relating to fiduciary responsibilities and prohibited activities of fiduciaries with respect to the Thrift Savings Fund of the Federal Employees' Retirement System. The Department has interpreted section 8477(g) to mean that the Department has a continuing responsibility to audit the Thrift Savings Fund established by FERSA.

³ These sections relate, in pertinent part, to: the Department's nonconsideration of exemption applications which are the subject of an investigation for possible violations of FERSA or which involve a party in interest who is the subject of such an investigation (§ 2570.33(a)(2)); and to the notification of the Division of Exemptions of certain investigations initiated after the filing of an exemption application (§ 2570.37(b)).

⁴ This section of the regulation requires certain exemption applications to include copies of correspondence relating to investigations, examinations, litigation, or continuing controversies with specified Federal agencies.

¹ Under section 111 of the FERSA Technical Corrections Act of 1986 (Pub. L. 99-556, October 27, 1986), the Department's existing exemptions procedures were made applicable to exemption applications under FERSA until the earlier of the date of publication of final regulations adopting an exemption procedure or December 31, 1988.

not, however, be precluded from denying, or failing to consider, an application based on an investigation prompted by information arising as a result of such a routine audit.

Definitions

Section 2570.31 of the proposed regulation defined the following terms for purposes of the exemption procedures: affiliate, class exemption, Department, exemption transaction, individual exemption, and party in interest. No comments were received regarding these definitions which are adopted in the final regulation as proposed. However, the Department has added to this section a definition of the term "pooled fund" in response to a comment requesting that a special rule be added to the final regulation regarding information to be furnished in exemption applications relating to plans affected by an exemption transaction undertaken by a pooled investment vehicle. (This comment is discussed in more detail below.)

Who May Apply for Exemptions

Section 2570.32(a) of the proposed regulation provided that exemption proceedings may be initiated by the Department either on its own motion or upon the application of: (1) Any party in interest to a plan which is or may be a party to the exemption transaction, (2) any plan which is a party to the exemption transaction, or (3) an association or organization representing parties in interest who may be parties to an exemption transaction covering a class of parties in interest or a class of transactions.

One of the comments received recommended modifying this paragraph of the regulation to permit an exemption application to be filed by any fiduciary or prospective fiduciary with respect to plan assets under such fiduciary's management or control, regardless of whether such fiduciary either represents a specific plan with respect to the exemption application or would be a party to the exemption transaction. The commentator clarified his comment by explaining that he intended this category of applicants to cover prospective fiduciaries, such as persons creating and/or managing a new investment vehicle in which plans are expected to participate if the requested exemption is granted, but in which no plans participate at the time the exemption application is filed. The commentator noted that in the past the Department has granted individual exemptions to institutional investment managers in connection with their investment management of individual

plans' investment accounts or pooled investment funds in which several unidentified plans may participate.

In the Department's view, the reference in proposed § 2570.32(a)(1) to "any party in interest to a plan who is or may be a party to the exemption transaction" includes the prospective fiduciaries mentioned by the commentator. Therefore, § 2570.32(a) is adopted in the final regulation without change.

Section 2570.32 (b) and (c) of the proposed regulation set forth simplified rules relating to representation of applicants by third parties. No comments were received regarding these paragraphs, which are adopted in the final regulation without change.

Applications the Department Will Not Ordinarily Consider

Section 2570.33(a) of the proposed regulation described the circumstances under which the Department will not ordinarily consider the merits of an exemption application. Thus, this paragraph provided that the Department will not ordinarily consider an incomplete application. In this regard, the Department emphasizes that applicants should not file exemption applications until they have compiled all the information required by § 2570.34 and, if applicable, § 2570.35, and can submit this information in an organized and comprehensive fashion together with all necessary supporting documents and statements. In addition, the proposal made it clear that the Department ordinarily will not consider applications that involve a transaction, or a party in interest with respect to such transaction, that is the subject of an ERISA enforcement action or investigation. In certain cases, however, the Department may exercise its discretion to consider exemption applications in these categories where, for example, deficiencies in the exemption application are merely technical, or where an enforcement matter is clearly unrelated to the exemption transaction.

One comment was received specifically regarding investigations, and it is discussed above under the heading "Applications for Exemption under FERSA." In addition, the Department has amended § 2570.33(a)(2) (relating to certain investigations and enforcement actions) to conform to a similar revision to § 2570.35(a)(7) (discussed below) made in response to two other comments received regarding the proposed requirement to include information in an application concerning certain investigations, examinations, litigation, or continuing controversy

involving specified Federal agencies with respect to any plan or party in interest involved in the exemption transaction. The effect of these amendments is to expand the proposed regulation in order to broaden the scope of exemption applications which the Department will ordinarily consider.

No comments were received on paragraphs (b) and (c) of proposed § 2570.33, which are adopted without change in the final regulation. These paragraphs relate to the Department's written explanation to an applicant whose exemption application the Department has decided not to consider, and to applications for individual exemption relating to transaction(s) covered by a class exemption under consideration by the Department.

Exemption Application Contents—General Information

As previously noted in the proposed regulation, the Department's experience to date with the administrative exemption program suggests that the program's efficiency could be increased and applicants can receive more timely treatment of their applications for exemption if the quality of exemption applications filed were improved. In the past, applications have been incomplete, have omitted or misstated facts or legal analyses needed to justify requests for exemptive relief, and in some cases have been so poorly drafted that the details of the transactions for which exemptive relief is sought ("exemption transactions") are unclear. The time and effort required to deal with such deficient applications and to obtain accurate and complete information about exemption transactions have contributed to processing delays. Moreover, in many exemption applications, the discussion of the substantive basis for the exemption does not take adequate account of positions adopted by the Department with respect to other similar applications.

The proposed regulation attempted to address these problems in a number of ways. First, the proposal required that applicants provide more complete information in their applications about exemption transactions and about the plans and the parties in interest involved in those transactions. The Department's experience suggests that this additional information is very helpful, and often essential, for a complete understanding of the exemption transaction and of the context surrounding it, and that the omission of such additional information in exemption applications will delay

review of these applications on their merits.

For the same reason, the proposed regulation required filing with the exemption application copies of the relevant portions of documents bearing on transactions for which individual exemptions are sought. Such filing will avoid delays in the evaluation of exemption applications pending receipt of relevant documents. By filing comprehensive applications with necessary supporting documentation, applicants can do much to facilitate the Department's review of requested exemptions and to expedite the exemption process as a whole.

To further expedite the exemption process, the proposed regulation required that an applicant include with his application a statement explaining why the requested exemption satisfies requirements set forth in sections 408(a) of ERISA and 4975(c)(2) of the Code and 5 U.S.C. 8477(c)(3)(C) that an exemption be:

- (1) Administratively feasible;
- (2) In the interests of the plan and of its participants and beneficiaries; and
- (3) Protective of the rights of the plan's participants and beneficiaries.

This requirement is not new. Under ERISA Proc. 75-1, applicants have been required to include with their applications statements explaining why a requested exemption satisfies the statutory prerequisites for an exemption. Too often, however, applicants have attempted to satisfy this requirement with generalizations and perfunctory assurances about the benefits to be reaped by plans and their participants and beneficiaries from the proposed exemption.

The Department will not seek out reasons to grant an exemption that has not been adequately justified by an applicant. Indeed, the Department considers that it is the responsibility of applicants to demonstrate clearly that exemptions they are requesting meet statutory criteria. Accordingly, under both the proposed and the final regulation, applicants are expected to review the statutory criteria for granting administrative exemptions and explain with as much specificity as possible why a requested exemption would pose no administrative problems, what benefits affected plans and their participants and beneficiaries can expect to receive from it, and what conditions would be attached to protect the rights of participants and beneficiaries of affected plans.⁵

Under ERISA Proc. 75-1, applicants have been given the option, but have not been required, to submit a draft of the proposed exemption. Both the proposed and the final regulation preserve this option. However, while not requiring the submission of a draft of the proposed exemption, the Department recommends that applicants include in their exemption applications draft language which defines the scope of the requested exemption, including the specific conditions under which the requested exemption would apply. A draft which explains the exemption requested in a clear and concise manner and focuses on what the applicant considers to be the essential features of the exemption transaction and the critical safeguards supporting the requested relief is likely to facilitate the process of review. Obviously, the degree of detail necessary to describe the proposed exemption adequately will vary depending on the complexity of the transaction and the kind of relief requested.

Section 2570.34 of the proposed regulation listed the information that is required in every exemption application, whether it be an application for individual or class exemption. In addition, the information specified in § 2570.35 of the regulation must be included in applications for individual exemptions. Some specific items of information are discussed below.

Shared Representation

Section 2570.34(a)(3) of the proposed regulation required each exemption application to disclose whether the same person will represent both the plan and the parties in interest involved in an exemption transaction in matters relating to the application. The proposal noted that such shared representation may raise questions under the exclusive purpose and prudence requirements of sections 403(c) and 404(a) of ERISA and under the prohibited transaction provisions of section 406 of ERISA and section 4975(c)(1) of the Code. No comments have been received regarding this subparagraph, which is adopted as proposed.

Third-Party Declarations

Section 2570.34(b)(5)(iii) of the proposed regulation required a declaration under penalty of perjury to accompany specialized statements from third-party experts submitted to support an exemption application, such as

appraisals, analyses of market conditions, or opinions of independent fiduciaries. Specifically, the proposal required a declaration under penalty of perjury, that to the best of the expert's knowledge and belief, the representations made in the specialized statement are true and correct. This declaration was to be dated and signed by the expert who prepared the statement.

One of the comments received urged deletion of this requirement and expressed concern that it would cause additional expense to applicants because new third-party statements would be required once the appraiser, engineer, financial specialist, or other expert became aware of their intended use as part of an exemption application. The commentator advised subsequently that such experts either may be reluctant to provide any sort of attestation because of unknown liabilities which may arise by using the expert's report as part of an exemption application, or may seek an additional, and perhaps substantial, fee for furnishing an attestation due to the unknown liabilities.

In this regard, the Department notes that, with respect to any matter within the jurisdiction of any department or agency of the United States, it is a crime, punishable by a fine of up to \$10,000 and/or imprisonment of up to five years, for anyone knowingly and willfully to falsify, conceal, or cover up by any trick, scheme or device a material fact; to make any false, fictitious, or fraudulent statements or representations; or to make or use any false writing or document knowing the same contains any false, fictitious, or fraudulent statement or entry (18 U.S.C. § 1001). It is the view of the Department that this provision applies to applicants for exemptions under ERISA, the Code, or FERSA, to fiduciaries (independent or otherwise) representing the plan in an exemption transaction, and to third-party experts who prepare statements or reports that such experts know will be included in exemption applications.

Nevertheless, the Department recognizes that third-party experts such as appraisers, bankers, financial analysts, and other specialized consultants usually do not function as fiduciaries with respect to a plan if such experts' authority, responsibility, or contact with respect to the plan is limited to providing an opinion which may be included in an exemption application and which will be considered by plan fiduciaries who will decide what, if any, action they will take on behalf of the plan based upon such

⁵ The Department must find that the statutory criteria are satisfied before granting a prohibited transaction exemption. The legislative history of

ERISA makes it clear, however, that the Department has broad discretion in determining whether or not to grant an exemption. H.R. Rep. 1280, 93 Cong., 2d Sess. 311 (1974).

opinion. The Department believes that such experts need not be held to the same degree of accountability regarding exemption applications covering transactions where a plan fiduciary has the authority and responsibility to make decisions on behalf of a plan. Thus, the Department has decided to modify proposed § 2570.34(b)(5)(iii) to provide that a statement of consent, rather than a declaration under penalty of perjury, is required from each such expert which acknowledges that his or her statement is being submitted to the Department as part of an exemption application. The Department believes that such a consent statement from a third-party expert will not require an applicant to obtain a new report from the expert because the expert's consent statement may refer to his or her previously issued report. (However, the Department may require an updated report in any case if the substantive information contained in a report submitted with an exemption application is out of date.)

Conversely, where an independent fiduciary represents the plan in an exemption transaction, that fiduciary is subject to all of the responsibilities imposed by part 4 of subtitle B of title I of ERISA. None of the comments received questioned the need for such a fiduciary to provide the declaration under penalty of perjury required under the proposed regulation, and the Department has decided to retain this proposed requirement for such plan fiduciaries in the final regulation. As a result, the Department has modified § 2570.34(b)(5)(ii) and has added § 2570.34(b)(5)(iv) to clarify that a declaration is required for such plan fiduciaries.

Pooled Funds

One comment suggested that § 2570.35 of the proposed regulation be modified to provide a special rule regarding information to be included in an application for an individual exemption involving a pooled investment fund, such as a pooled separate account maintained by an insurance company or a collective investment fund maintained by another financial institution. The commentator pointed out that, as proposed, § 2570.35 would require information to be submitted regarding each plan participating in a pooled investment fund, resulting in the submission of an overwhelming volume of information unrelated to the exemption transaction. However, the commentator recognized that information regarding certain plans may be relevant to the exemption application in view of the potential for conflicts of interest involving such plans. Such plans

would include any plan maintained for employees of the sponsor or other fiduciary of the pooled investment fund, and a plan whose participation in the pooled fund exceeded a specified percentage of the total fund assets.

The Department agrees with this comment and, accordingly, has added a new paragraph (c) to § 2570.35, which contains a special rule for applications for individual exemptions involving pooled funds [as defined in § 2570.31(g)]. Subparagraph (1) of § 2570.35(c) excepts such applications from including certain information otherwise required relating to among other things: reportable events under section 4043 of ERISA, notice of intent to terminate a plan (section 4041 of ERISA), the number of participants and beneficiaries of each plan participating in the pooled fund, and the percentage of each such plan's assets involved in the exemption transaction.

Subparagraph (2) of the special rule provides that certain information otherwise required by § 2570.35 (a) and (b) of the regulation must be furnished by reference to the pooled fund rather than the plans participating in such fund. This information pertains to: Identifying information; any prior violations of the Code's exclusive benefit rule or of the prohibited transaction provisions of the Code, ERISA or FERSA; any prior applications for exemption from such prohibited transaction provisions; any lawsuits or criminal actions regarding conduct with respect to any employee plan; any criminal convictions described in section 411 of ERISA; any investigation or continuing controversy with specified Federal agencies regarding compliance with ERISA, Code provisions relating to employee plans, or FERSA provisions relating to the Federal Thrift Savings Fund; whether the exemption transaction has been consummated and, if so, certain related information regarding correction of the prohibited transaction and payment of excise taxes; the identification of persons with investment discretion over any assets involved in the exemption transaction and each such person's relationship to the parties in interest involved in the exemption transaction; investments involving certain parties in interest; the fair market value of the pooled fund; the identity of the person who will pay the costs of the exemption application, notifying interested persons, and the fee of any independent fiduciary involved in the exemption transaction; and an analysis of the facts relevant to the exemption transaction as reflected in documents submitted with the application. The pooled fund, rather

than participating plans, must also furnish copies of all relevant documents, including, for example, the most recent financial statements of the pooled fund.

Subparagraph (3) of the special rule requires information to be furnished with pooled fund exemption applications with respect to: the aggregate number of plans expected to participate in the pooled fund, and the limits (if any) imposed by the pooled fund on the amount or percentage of each participating plan's assets that may be invested in the pooled fund.

Subparagraph (4) of § 2570.35(c) contains additional requirements for applications for individual exemptions involving pooled funds. These requirements apply to plans whose investments in the pooled fund represent more than 20% of the pooled fund's total assets⁶ and those plans covering employees of the pooled fund's sponsor, and other fiduciaries with discretion over pooled fund assets. The Department believes that additional information is warranted in those situations where the potential for decision making that may inure to the benefit of a fiduciary or other party in interest is increased. For each of these plans, the additional requirements provide for the furnishing of certain individual plan information described in § 2570.35(a), in addition to the information required under § 2570.35 (c)(2) and (c)(3). The Department believes this information is necessary for its determination as to whether sufficient protections are incorporated into the exemption transaction.

The Department further notes that the decision by the fiduciaries of certain plans to invest in a pooled fund may involve a separate prohibited transaction, apart from any prohibited transaction which may be entered into by the pooled fund itself. In this regard, the Department notes that the information required to be submitted on behalf of such plans is to be provided in accordance with the general rule contained in § 2570.35, rather than the special rule for pooled funds.

Finally, the Department believes that the special rule for pooled funds is less burdensome to applicants than the rules set forth in the proposed regulation. As noted by a commentator, the proposed regulation would have required the submission of voluminous amounts of material, as information would have to be submitted on behalf of each plan investing in a pooled fund. The final

⁶ See section I(e) of PTE 84-14 (49 FR 9494, March 13, 1994) the class exemption involving qualified professional asset managers.

regulation limits the amount of material to be submitted since it requires only information relating to the pooled fund and, where applicable, certain plans investing in the pooled fund. In addition, the Department believes that its ability to analyze and process applications for exemption involving pooled funds will be enhanced by this special rule. In this regard, the Department believes that the final regulation eliminates a significant amount of material that otherwise would have been required.

Lawsuits, Certain Criminal Convictions, Investigations, Examinations, Continuing Controversies, etc.

Sections 2570.35(a) (5), (6), and (7) of the proposed regulation required exemption applications to disclose information regarding whether the applicant or any of the parties to the exemption transaction is or has been, within a specified number of years past, a defendant in any lawsuit or criminal action concerning conduct as a fiduciary or other party in interest with respect to any employee benefit plan (§ 2570.35(a)(5)), convicted of a crime described in section 411 of ERISA (§ 2570.35(a)(6)), or under investigation or examination or engaged in litigation or a continuing controversy with certain Federal agencies (§ 2570.35(a)(7)). Proposed § 2570.35(a)(7) also required disclosure of whether any plan affected by the exemption transaction has been under such investigation, examination, litigation, or continuing controversy, and further required the applicant to submit copies of all correspondence with the specified Federal agencies regarding substantive issues involved in such investigation, etc.

Two of the comments urged deletion of the disclosure requirements of proposed § 2570.35(a) (5) and (7) on the basis that such disclosure is difficult, costly, and almost always irrelevant to the exemption transaction.

The Department continues to believe that the proposed disclosure is relevant to the exemption transaction. With regard to § 2570.35(a)(5) (relating to lawsuits or certain criminal actions), the Department views the disclosure required as directly concerning the conduct of the applicant and other parties in interest participating in the exemption transaction. The Department believes that such information is necessary in evaluating the credibility and integrity of such parties, some of whom may possess substantial discretion regarding the exemption transaction or may make representations upon which the Department must rely in determining whether the statutory criteria for an

exemption have been satisfied. In addition, the proposed disclosure assists the Department in ensuring that the exemption transaction contains appropriate safeguards.

Further, the Department does not agree that the disclosure required by § 2570.35(a)(5) imposes any significant burdens on applicants. The Department believes that prudent fiduciaries would, in the normal course of carrying out their responsibilities, ascertain such information about the parties they intend to deal with in investment and other plan transactions. However, the Department has determined that it would be appropriate to modify proposed § 2570.35(a)(5) in the final regulation to limit disclosure to the applicant or any of the parties in interest involved in the exemption transaction.

Regarding the disclosure required by proposed § 2570.35(a)(7) (relating to investigations, examinations, litigation, and continuing controversy by or with the specified Federal agencies), the Department believes that such information is necessary to ensure that the Department's exemption activities do not compromise its enforcement efforts. Although the Department is most interested in information involving investigations, etc. that are directly related to the subject exemption transactions and the participating parties, the Department believes, nevertheless, that its exemption staff, and not the applicants, should determine which investigations, examinations, etc. are relevant.

One of the comments further suggested that it is inappropriate to require applicants to disclose matters which have resulted in no formal allegations of violations of law. The Department notes, however, that the affected parties may include, as part of their disclosure, any qualifications or explanations they deem appropriate for consideration by the Department, including information on the final disposition of any matter.

Another commentator suggested that disclosure under § 2570.35(a)(7) be limited to a reference to the investigation or litigation without requiring submission of copies of "all correspondence" involved in the investigation. In this regard, the Department notes that the proposed regulation did not require submission of copies of all correspondence, but only of correspondence relating to the substantive issues involved in the investigation, examination, litigation, or controversy. Specifically, the Department intended to require submission of copies of correspondence

containing only that information directly relevant to determining whether or not the requested exemption should be granted. After considering the comment, the Department has modified § 2570.35(a)(7) to clarify that the phrase "substantive issues" refers to issues related to compliance with the provisions of parts 1 and 4 of subtitle B of title I of ERISA (reporting and disclosure (part 1) and fiduciary responsibility (part 4)), section 4975 of the Code, or sections 8477 or 8478 of FERSA (fiduciary responsibilities, liability and penalties (section 8477) and bonding (section 8478)). Copies of correspondence relating to any of these substantive issues is necessary in order for the Department to determine the effect the requested exemption may have on the Department's enforcement activities in each case under investigation, examination, etc.

One of the comments noted that proposed § 2570.35(a)(5), (6), and (7) required the disclosure of information regarding any parties to the exemption transaction and suggested limiting the required disclosure to fiduciaries authorizing the transaction and any parties in interest involved in the exemption transaction. This comment pointed out that investment transactions may involve multiple parties, many of whom are neither plan fiduciaries nor parties in interest. After due consideration, the Department agrees with this suggestion and, accordingly, has modified § 2570.35(a)(5), (6), and (7) to limit the required disclosure to any parties in interest involved in the exemption transaction. The Department notes that this group includes, among others, the fiduciary authorizing the exemption transaction.

See the heading "Applications for Exemption under FERSA," above, regarding modification to proposed § 2570.35(a)(7) as applicable to the Federal Thrift Savings Plan established by FERSA.

Party-in-Interest Investments

Proposed § 2570.35(a)(16) required an application for individual exemption to disclose information regarding any plan investments in loans to, property leased to, or securities issued by, any party in interest involved in the exemption transaction. One of the comments suggested deletion of this requirement due to the difficulty of identifying such investments in view of the "look-through" rule contained in the Department's plan asset regulation (29 CFR 2510.3-101). This comment suggested that the proposed disclosure may involve many transactions, by an

entity whose underlying assets include "plan assets," which are totally unrelated to the exemption transaction. The comment further indicated that this disclosure would be burdensome for exemption transactions involving numerous parties in interest, such as those involving pooled funds.

The Department agrees that, for exemption applications involving pooled funds, furnishing the proposed disclosure could be burdensome inasmuch as such applications generally do not relate to specific plans. Accordingly, the Department has adopted a special rule for applications for individual exemption involving pooled funds, discussed above (under the heading "Pooled Funds"), which limits this type of disclosure to the pooled fund and to certain plans participating therein.

Regarding exemption applications involving specific individual plans, it appears to the Department that the information to be disclosed under proposed § 2570.35(a)(16) must be maintained, in any event, to satisfy the annual reporting requirements of section 103 of ERISA, as well as the recordkeeping requirements of section 107. Therefore, the Department believes that this disclosure requirement should not impose any additional burdens on the applicant. The information to be disclosed will enable the Department to determine whether the exemption transaction, in conjunction with other plan investments involving parties in interest, would unduly concentrate the plan's assets in such investments so as to raise questions under the fiduciary responsibility provisions of section 404 of ERISA. For these reasons, the Department has decided to adopt § 2570.35(a)(16) as proposed, subject to the special rule for applications for individual exemption involving pooled funds in § 2570.35(c).

Costs Related to the Exemption Application

Proposed § 2570.35(a)(18) and (19) required the exemption application to identify the person who will bear the costs of the exemption application, of notifying interested persons, and of the fee charged by any independent fiduciary involved in the exemption transaction. The preamble to the proposed regulation noted that a plan's payment of the expenses associated with the filing or processing of an exemption application raises questions under the fiduciary responsibility and the prohibited transaction restrictions to the extent that any party in interest benefits from the transaction for which

an exemption is sought (see section 406(a)(1)(D) of ERISA).

One of the commentators requested that the Department provide a more specific discussion of when it believes such questions will be raised. The comment states that, in many cases, it is appropriate for the plan to pay the expenses attributable to obtaining an exemption, and that an independent fiduciary's fees are generally paid by the plan receiving such fiduciary's services in order to ensure that such fiduciary conducts its activities in a totally independent manner and without any potential influence from persons other than the plan paying such fees.

The proposed disclosure of who pays the fees for an exemption application is intended to enable the Department to review the appropriateness of such payment by a plan in the context of a specific exemption request. Such disclosure is also intended to aid the exemption staff in evaluating whether the economic merits of the transaction, taking into account the costs attributable to the exemption application, support a finding that the proposed transaction is in the interests of the plan and its participants and beneficiaries. While the Department agrees that there may be certain instances in which it would be appropriate for a plan to pay all or part of the costs attendant with obtaining an exemption, such as where it is necessary to ensure the independence of an independent fiduciary or third-party expert, the Department believes that the propriety of such payments by a plan is an inherently factual determination which can be made only on a case-by-case basis.

In this regard, the Department notes that, when evaluating the propriety of the payment by a plan of certain expenses, plan fiduciaries must first consider the general fiduciary responsibility provisions of sections 403 and 404 of ERISA. Section 403(c)(1) provides, in part, that the assets of an employee benefit plan shall never inure to the benefit of any employer and shall be held for the exclusive purpose of providing benefits to participants and beneficiaries and defraying reasonable expenses of administering the plan. Similarly, section 404(a)(1)(A) requires, in part, that a fiduciary of a plan discharge his duties for the exclusive purpose of providing benefits to participants and their beneficiaries and defraying reasonable expenses of administering the plan. Thus, a payment that is not a distribution of benefits to participants or beneficiaries of a plan would not be consistent with the

requirements of sections 403(c)(1) and 404(a)(1)(A) unless it was used to defray a reasonable expense of administering the plan.

In addition, section 406(a)(1)(D) of ERISA prohibits a fiduciary with respect to a plan from causing the plan to engage in a transaction if he knows or should know that such transaction constitutes a direct or indirect transfer to, or use by or for the benefit of, a party in interest of any assets of the plan. It is the responsibility of appropriate plan fiduciaries to determine whether a particular expense is a reasonable administrative expense under sections 403(c)(1) and 404(a)(1)(A) of ERISA or whether plan payment of an expense would constitute a prohibited use of plan assets for the benefit of a party in interest under section 406(a)(1)(D) of ERISA.

Copies of Documents

Section 2570.35(b)(1) of the proposed regulation required each application for individual exemption to include true copies of all documents bearing on the exemption transaction, such as contracts, deeds, agreements, instruments, and relevant portions of plan documents, including trust agreements.

One comment objected to this requirement on the grounds that having to assemble the required documents is time consuming, costly, and unnecessary if the exemption application properly describes all pertinent plan provisions and other documents in sufficient detail to allow the Department to evaluate the merits of the exemption transaction. In this regard, the Department notes that the documents with respect to which copies are requested are all documents which would be readily available to the parties to the exemption transaction. Accordingly, the Department does not believe that there would be a significant burden in either compiling the documents or in transmitting copies to the Department. Further, the Department notes that it is not uncommon for representations contained in an exemption application to be inconsistent with the provisions of the governing documents or for the latter to contain provisions with respect to which clarifications or other representations are needed in order for the requested exemption to be proposed. On the basis of the Department's experience with exemptions, scrutiny of the relevant documents is, in the large majority of cases, a necessary prerequisite to a complete understanding of the exemption transaction and the implications for affected plans and

parties in interest. Moreover, in the Department's experience, the inclusion of copies of the requested documents, as part of the exemption application, has expedited the processing of the requested exemption.

For these reasons, the final regulation adopts proposed § 2570.35(b)(1) without change. However, the Department wishes to clarify three points regarding this requirement. First, for exemption transactions in which identical documents will be executed by more than one party, the submission of only one specimen document will satisfy the requirements of this paragraph.

Second, in the case of exemption transactions which are proposed, copies of the documents relating to the proposed transaction need not be executed or dated when they are submitted with the exemption application if the documents are complete in every other respect. In this regard, the Department strongly encourages requesting an administrative exemption before entering into a prohibited transaction because of the ability to incorporate all of the necessary safeguards into the transaction. By contrast, such safeguards cannot be put into place after a prohibited transaction has occurred.

Third, only copies of documents need be submitted. The Department may not be able to return original documents and, therefore, urges that only true copies of documents be submitted.

Where To File an Application

Although no comments were received regarding this section, which is adopted as proposed, the Department wishes to advise applicants that including the room number of the Division of Exemptions in the address will generally expedite its delivery. The current room number of the Division of Exemptions, Room N-5671, is not included in the regulation to avoid the need to amend the regulation every time the room number of the Division changes.

Duty To Amend and Supplement Information

The proposed regulation continued the requirement established in ERISA Proc. 75-1 that an applicant promptly notify the Division of Exemptions if he discovers that any material fact or representation contained in his application, or in any supporting documents or testimony, was inaccurate or if any such fact or representation changes. However, the proposed regulation added the requirement that an applicant notify the Division of Exemptions when anything occurs that

may affect the continuing accuracy of such facts or representations.

Two comments received indicated confusion as to the expiration date of the duty to update information submitted as part of an exemption application. Accordingly, the final regulation clarifies § 2570.37 (a) and (b) to indicate that such duty applies only during the pendency of the exemption application and expires after the exemption is granted. The Department also wishes to clarify that, in § 2570.37(a), the phrase "continuing accuracy of any such fact or representation" refers to future events or changes known before the exemption is granted that will render inaccurate facts stated or representations made before such grant. The Department also wishes to note that exemptions are granted only to transactions as described. Therefore, if an exemption is granted and the transaction is not as described in some material aspect, the exemption does not take effect or protect parties in interest from liability for the transaction. See § 2570.49 of the regulation.

Tentative Denial Letters

Although ERISA Proc. 75-1 established no procedures to be followed by the Department in denying exemption applications or by applicants in responding to such denials, the Department has developed procedures over the years to notify applicants first to the tentative and, later, of the final denial of their applications. In large part, the proposed regulation codified these procedures.

Under the proposed regulation, the Department may decide to deny an exemption request at any one of a number of stages in the review process. For example, it may decide after its initial review of an application that the requested exemption does not satisfy the statutory criteria set forth in sections 408(a) of ERISA and 4975(c)(2) of the Code. In that event, the Department will send a tentative denial letter to the applicant pursuant to § 2570.38 of the regulation. That letter will inform the applicant of the Department's tentative decision to deny the application and of the reasons therefor. Under § 2570.38, an applicant has 20 days from the date of this letter to request a conference with the Department and/or to notify the Department of his intent to submit additional information in writing to support the application. If the Department receives no request for a conference and no notice of intent to submit additional information within that time, it will send the applicant a

final denial letter pursuant to § 2570.41 of the regulation.

One of the comments received suggested that: (1) The final regulation should clarify that the Department's exemption staff may request applicants to provide additional information before a tentative denial letter is issued, and (2) rather than a "short statement" of the reasons for a tentative denial, the tentative denial letter should provide a detailed explanation of the basis for the Department's decision. Regarding the first suggestion, the comment indicates that it is unreasonable to expect an applicant to anticipate, when the exemption application is filed, all of the material which the Department may find pertinent to its consideration of an exemption application.

As stated above (under the heading "Exemption Application Contents—General Information"), the Department's view is that the applicant bears the responsibility to demonstrate clearly that the requested exemption meets the statutory criteria. While nothing in the proposed regulation would preclude the Department's exemption staff from exercising its discretion and contacting an applicant for a clarification or additional information, the Department anticipates that such contact will be limited to exemption applications which, upon initial review, meet the essential requirements of the regulation. It is not administratively feasible to expect the Department's exemption staff to solicit information in every case. Moreover, such a procedure would, in effect, shift the burden of developing the exemption application from the applicant to the exemption staff.

Similarly, the imposition of a requirement that tentative denial letters detail all the reasons for the denial would, in effect, shift the analytical burden from the applicant to the Department. As with the circumstances under which additional information is solicited from applicants, the Department believes that the degree of detail required for a tentative denial letter should be left to the discretion of the exemption staff. The Department believes that a general statement of the reasons for a tentative denial is sufficient inasmuch as the issuance of a tentative denial letter does not terminate the exemption proceedings. Rather, the tentative denial letter offers the applicant the opportunity to have a conference and/or to submit additional information for consideration. In addition, a requirement to issue a comprehensive and detailed tentative denial letter in most cases would

significantly increase the time required to conclude a final action.

For these reasons, the Department has decided to adopt proposed § 2570.38 without change.

Opportunities To Submit Additional Information

Section 2570.39 of the proposed regulation provided that if an applicant wishes to submit additional information in support of a tentatively denied exemption application, he may notify the Department of his intention to do so within the prescribed 20-day period either by telephone or by letter. After issuing such a notice, an applicant has 30 days from the date of the notice to furnish additional information to the Department. If an applicant notifies the Department of his intent to submit additional information but requests no conference, and subsequently fails to submit the promised information within the prescribed 30-day period, the Department will issue the applicant a final denial letter pursuant to § 2570.41 of the regulation. However, an applicant who realizes that he will be unable to submit his additional information within the allotted time may avoid receiving a final denial letter by withdrawing his application before the end of the 30-day period pursuant to § 2570.44.

As an alternative to withdrawing his application, an applicant who, for reasons beyond his control, is unable to meet the 30-day deadline may request an extension of time for filing additional information, pursuant to § 2570.39 of the regulation. However, the Department will grant such extensions of time only in unusual circumstances.

No comments were received on this section of the proposed regulation which is adopted without change in the final regulation.

Conferences

Section 2570.40 of the proposed regulation described the procedures regarding conferences on exemption applications which the Department has tentatively decided to deny. Under this proposed section, an applicant is entitled to only one conference with respect to any exemption application, and is also given 20 days after the date of any conference to submit to the Department in writing any additional data or arguments discussed at the conference but not previously or adequately presented in writing. Under the proposal, an applicant is deemed to have waived his right to a conference if he fails, without good cause, to appear for a scheduled conference or to schedule a conference for any of the times proposed by the Department

within the 45-day period following the receipt of his request for a conference.

Proposed § 2570.40 is adopted without change in the final regulation. The only comment received regarding this proposed section suggested that the Department continue its practice of informally consulting with applicants on exemption applications in addition to holding conferences. In this regard, the Department will continue to informally contact applicants as it deems appropriate.

Final Denial Letters

Proposed § 2570.41 is adopted without change in the final regulation. No comments were received on this section which specifies the circumstances in which the Department may issue a final denial letter denying a requested exemption. In most cases, the same procedure will also be followed in denying exemptions that the Department has already proposed through publication of a notice of proposed exemption in the *Federal Register*. However, in cases where the Department holds a hearing on an exemption, § 2570.41(a)(3) of the proposed regulation allowed the Department to issue a final denial letter without first issuing a tentative denial letter and without providing the applicant with the opportunity for a conference. In the Department's view, where a hearing on a proposed exemption is conducted, the applicant and other proponents of the exemption have adequate opportunity to present their views and other evidence in support of the exemption.

Notice of Proposed Exemption

The proposed regulation did not significantly alter the procedures established by ERISA Proc. 75-1 for granting an exemption. Under § 2570.42 of the regulation, the Department will publish a notice of proposed exemption in the *Federal Register* if, after reviewing an exemption application and any additional information submitted by an applicant, the Department tentatively concludes that the requested exemption satisfies the statutory criteria for the granting of an exemption and that the requested exemption is otherwise appropriate. This proposed section also described the contents of the notice of proposed exemption.

No comments were received on proposed § 2570.42, which is adopted without change in the final regulation.

Notifying Interested Persons

Like ERISA Proc. 75-1, the proposed regulation required applicants to provide notice to interested persons in

the event that the Department decides to propose the exemption. Section 2570.34 of the proposal required an applicant to submit with his application a description of the interested persons to whom notice will be provided and a description of the manner in which the applicant proposed to provide notice. That section also required an applicant to provide an estimate of the time he will need to furnish notice to interested persons following publication of a notice of proposed exemption.

Section 2570.43 of the proposed regulation provided guidance on methods an applicant may use to notify interested persons of a proposed exemption and indicated what must be included in the notice. In addition to the Notice of Proposed Exemption published in the *Federal Register*, the applicant must include in the notification to interested persons a supplemental statement. Section 2570.43 also stated that, once the Department has published a notice of proposed exemption, the applicant must notify the interested persons described in his application in the manner indicated in the application unless the Department has informed the applicant beforehand that it considers the method of notification described in the application to be inadequate. Where the Department has so informed an applicant, it will also secure from the applicant an agreement to provide notice in the time and manner and to the persons designated by the Department. After furnishing notification, an applicant must provide the Department with a declaration under penalty of perjury certifying that notice was given to the persons and in the manner and time specified in his application or the superseding agreement with the Department.

One of the comments received concerning notification requested clarification that, in the case of a pooled fund, the notification requirement would be satisfied if the notice to interested persons is furnished to the appropriate fiduciary of each of the plans participating in the pooled fund, but not to all participants and beneficiaries of such plans.

In the Department's view, the individuals or organizations that will constitute "interested persons" depends on the nature of the exemption being requested. For this reason, the proposed regulation did not attempt to delineate the term "interested persons" for purposes of the notification requirements of § 2570.43. As previously noted, the applicant is required to include, as part of the exemption application, a description of the

interested persons to whom the applicant intends to provide notice (§ 2570.34(b)(2)(i)). If the Department finds that either the method of providing the notice or the persons to whom the applicant proposes to provide notice is inadequate, the Department will, pursuant to § 2570.43, secure an agreement from the applicant on the appropriate method of providing the notice and/or the scope of the notice to be provided. The Department believes that this approach provides the flexibility necessary to accommodate the varied types of exemption applications, as well as circumstances unique to a particular applicant.⁷

Accordingly, the Department has decided to adopt § 2570.43 as proposed. However, subparagraph (b)(2) of this section has been modified to insert references to the Code and FERSA, and to reflect the current room number of the Division of Exemptions in a footnote to that section. Paragraph (d) of this section has also been modified to clarify that the declaration accompanying the statement to be furnished to the Department regarding the notice to interested persons must be made under penalty of perjury, as stated in the preamble to the proposed regulation (53 FR 24422, at 24425, June 28, 1988).

Withdrawal and Reinstatement of Exemption Applications

Section 2570.44 of the proposed regulation permitted an applicant to withdraw his application at any time and to reinstate the application later. Reinstatement may be requested without resubmitting any information or materials previously furnished if no more than two years has elapsed from the withdrawal date. The request for reinstatement must be accompanied by any additional information that was outstanding at the time of withdrawal.

No comments were received on this proposed section, which is adopted in the final regulation without change.

Requests for Reconsideration of Final Denials

Under § 2570.45 of the proposed regulation, after the Department has issued a final denial letter on an exemption, it will not reconsider an application covering the same transaction unless the applicant presents significant new facts or arguments in support of the exemption which, for good reason, the applicant could not have submitted for consideration during the Department's

initial review of the exemption application. An applicant must present the significant new facts or arguments in a request for reconsideration within 180 days after the issuance of the final denial letter.

Proposed § 2570.45 also stated that only one request for reconsideration of any finally denied application will be considered by the Department. Although no comments were received on this section of the proposed regulation, the Department has modified this section in the final regulation to clarify that the Department will not limit the number of requests for reconsideration of final denials based solely on the applicant's failure to respond timely to a tentative denial letter or to furnish additional information timely (i.e., within the time frames provided under §§ 2570.38(b) or 2570.39(e), respectively).

The Department has also clarified in the final regulation that the declaration required under § 2570.45(c) must be made under penalty of perjury. This clarification is consistent with the requirement of § 2570.34(b)(5) that every original exemption application must be accompanied by a similar declaration under penalty of perjury. The Department intends that the same type of declaration should accompany both an original exemption application and a request for reconsideration of a final denial based on the merits of such an application.

Hearings

Section 408(a) of ERISA precludes the Department from granting an exemption from the fiduciary self-dealing prohibitions of section 406(b) unless the Department affords an opportunity for a hearing and makes a determination on the record with respect to the three statutory criteria established for granting an exemption.⁸ Because these provisions specify that an opportunity for a hearing must be given before an exemption from these prohibitions is granted, but not before such an exemption is denied, the Department interprets these provisions to mean that only opponents of such an exemption must be given an opportunity for a hearing. Moreover, the Department has concluded that it must provide a hearing on the record to opponents of such a proposed exemption only where it appears that there are material factual issues relating to the proposed exemption that cannot be fully explored

without such a hearing. Indeed, in the Department's experience, such hearings are not useful where the only issues to be decided are matters of law or where material factual issues can be adequately explored by less costly and more expeditious means, such as written submissions. Accordingly, under § 2570.46 of the proposed regulation, the Department requires that persons who may be adversely affected by the grant of an exemption from the fiduciary self-dealing prohibitions offer some evidence of the existence of issues that can be fully examined only at a hearing before it will grant a request for a hearing. Where persuasive evidence of the existence of such issues is offered, however, the Department will grant the requested hearing.

Under § 2570.47 of the proposed regulation, the Department may schedule a hearing on its own motion if it determines that a hearing would be useful in exploring issues relevant to the requested exemption. Under the proposed procedures, if the Department decides to conduct a hearing on an exemption under either § 2570.46 or § 2570.47, the applicant must notify interested persons of the hearing in the manner prescribed by the Department. Ordinarily, such notice may be provided by furnishing interested persons with a copy of the notice of hearing published by the Department in the *Federal Register* within 10 days of its publication. After furnishing notice, the applicant must submit to the Department a declaration under penalty of perjury certifying that notice has been provided in the manner prescribed.

Any testimony or other evidence offered at a hearing held under either § 2570.46 or § 2570.47 becomes part of the administrative record to be used by the Department in making its final decision on an exemption application.

No comments were received on proposed §§ 2570.46 and 2570.47, which are adopted without change in the final regulation.

Grant of Exemption

Section 2570.48 of the proposed regulation provided that if, after considering all of an applicant's submissions, together with any comments received from interested persons and the record of any hearing held in connection with a requested exemption, the Department determines that the exemption should be granted, it will publish a notice in the *Federal Register* granting the exemption. This proposed section also described the contents of the grant notice.

⁷ The Department notes that the form of the notice is prescribed under § 2570.43(b) of the regulation.

⁸ Section 4975(c)(2) of the Code and 5 U.S.C. 8477(c)(3)(D) (added by FERSA) contain similar hearing requirements. The following discussion of the hearing requirements of section 408(a) of ERISA is equally applicable to those statutory provisions.

No comments were received on proposed § 2570.48, which is adopted without change in the final regulation.

Limits on the Effect of Exemptions

Notwithstanding the duty to amend and supplement exemption applications provided under § 2570.37, the Department expressly conditions every exemption on the accuracy and completeness of the facts and representations provided by an applicant in support of the exemption. Therefore, as indicated under § 2570.49 of the proposed regulation, an exemption does not take effect or protect parties in interest from liability unless the material facts and representations contained in the application or in any other materials, documents, or testimony submitted by the applicant in support of the application were true and complete.

Thus, for example, in the case of a continuing exemption transaction such as a loan or a lease, if any of the material facts described in the application were to change after the exemption is granted, the exemption would cease to apply as of the date of such change even though, pursuant to § 2570.37, the applicant would not be obligated to notify the Department of such change. In the event of any such change, the parties in interest involved in the exemption transaction may apply for a new exemption to protect themselves from liability on or after the date of such change. Such an application should be submitted before such change occurs (see the discussion of prospective, versus retroactive, exemptions under the heading "Copies of Documents," above).

No comments were received on proposed § 2570.49, which is adopted without change in the final regulation.

Revocation or Modification of Exemptions

Section 2570.50 of the proposed regulation described the circumstances under which the Department may revoke or modify a previously granted exemption and the rights afforded to the applicant and to other interested persons in the event such revocation or modification is proposed. This section also provided that ordinarily such revocation or modification will be prospective only. Under this proposed section, one of the circumstances permitting the Department to modify or revoke an exemption was a change in policy which calls into question the continuing validity of the Department's original conclusions regarding the granted exemption.

Two of the comments objected to permitting a change in policy as grounds for revoking or modifying a granted exemption. The commentators argued that disturbing transactions already reviewed and approved by the Department would inject an unneeded element of uncertainty into the exemption process. Moreover, concern was expressed that the revocation of an exemption could severely disrupt an applicant's business and impose great financial hardship. A commentator suggested that the final regulation include a prohibition against revocation of an exemption until the affected party in interest is given both written notice of the facts or conduct which may warrant the revocation and an opportunity to demonstrate compliance with the requirements of the exemption.⁹

Proposed § 2570.50 is intended to provide the Department with the flexibility to undertake appropriate action in those cases where, subsequent to the grant of an exemption, potentially abusive practices or changes in the regulatory environment of an industry are identified which would cause the Department to reconsider its policy with respect to whether the exemption transactions continue to satisfy the statutory criteria under section 408(a) of ERISA.

With regard to the procedural issues raised by one of the comments, the Department notes that paragraph (b) of proposed § 2570.50 provides for notice to interested persons by publication in the *Federal Register*, notice to the applicant of the proposed revocation or modification, and an opportunity for the interested persons and the applicant to submit comments on the proposed revocation or modification.

After careful consideration of the comments, the Department has decided to adopt § 2570.50 as proposed. However the Department has clarified paragraph (b) to provide that the notice of proposed revocation or modification given to the applicant must be in writing.

Public Inspection and Copies

Section 2570.51 of the proposed regulation provided that the public may examine and copy any exemption application and all correspondence and documents submitted in regard thereto and may receive photocopies of all or

⁹ This comment compares the revocation of an exemption to the revocation of a license granted by an agency of the United States Government pursuant to 5 U.S.C. 558(c). The Department is expressing no opinion herein as to the applicability of 5 U.S.C. 558(c) to the revocation of prohibited transaction exemptions under ERISA, the Code, or FERSA.

any portion of such administrative record for a specified charge per page. For this reason, the Department cannot honor requests to keep confidential any information submitted regarding an exemption application. Therefore, none of the information submitted in regard to a requested exemption should be material that the applicant or other sender does not wish to disclose to the public.

No comments were received on proposed § 2570.51, which is adopted without change in the final regulation.

Executive Order 12291 Statement

The Department has determined that this regulatory action would not constitute a "major rule" as that term is used in Executive Order 12291 because the action would not result in: an annual effect on the economy of \$100 million; a major increase in costs or prices for consumers, individual industries, government agencies, or geographical regions; or significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in the domestic or export markets.

Regulatory Flexibility Act Statement

The Department has determined that this regulation would not have a significant economic impact on small plans or other small entities. As stated previously, this regulation would do little more than describe procedures that reflect practices already in place for filing and processing applications for exemptions from the prohibited transaction provisions of the Employee Retirement Income Security Act of 1974, the Internal Revenue Code of 1986, and the Federal Employee Retirement System Act of 1986.

Paperwork Reduction Act

This regulation modifies current collection of information requirements. It does so largely by codifying requests for facts and opinions that are routinely addressed to applicants for exemptions under current procedures. Accordingly, the regulation will not increase the paperwork burden for applicants. The regulation has been approved by the Office of Management and Budget under the provisions of the Paperwork Reduction Act of 1980 (Pub. L. 96-511). The final regulation is assigned control number 1210-0060.

Authority

The final regulation set forth herein is issued pursuant to the authority granted

in sections 408(a) (Pub. L. 93-406, 88 Stat. 883, 29 U.S.C. 1108(a)) and 505 (Pub. L. 93-406, 88 Stat. 894, 29 U.S.C. 1135) of ERISA, under Reorganization Plan No. 4 of 1978 (43 FR 47713, October 17, 1978), under 5 U.S.C. 8477(c)(3), and under Secretary of Labor's Order No. 1-87 (52 FR 13139, April 21, 1987).

List of Subjects in 29 CFR Part 2570

Administrative practice and procedure, Employee benefit plans, Employee Retirement Income Security Act, Federal Employees' Retirement System Act, Party in interest, Pensions, Prohibited transactions.

Final Regulation

For the reasons set out in the preamble, parts 2570 and 2585 of chapter XXV of title 29 of the Code of Federal Regulations are amended as follows:

PART 2570—[AMENDED]

1. The authority for part 2570 is revised to read as follows:

Authority: 29 U.S.C. 1108(a), 1135; Reorganization Plan No. 4 of 1978; 5 U.S.C. 8477(c)(3); Secretary of Labor's Order No. 1-87.

Subpart A is also issued under 29 U.S.C. 1132(i).

2. By adding in the appropriate place the following new subpart B to part 2570.

Subpart B—Procedures for Filing and Processing Prohibited Transaction Exemption Applications

- Sec.
- 2570.30 Scope of rules.
 - 2570.31 Definitions.
 - 2570.32 Persons who may apply for exemptions.
 - 2570.33 Applications the Department will not ordinarily consider.
 - 2570.34 Information to be included in every exemption application.
 - 2570.35 Information to be included in applications for individual exemptions only.
 - 2570.36 Where to file an application.
 - 2570.37 Duty to amend and supplement exemption applications.
 - 2570.38 Tentative denial letters.
 - 2570.39 Opportunities to submit additional information.
 - 2570.40 Conferences.
 - 2570.41 Final denial letters.
 - 2570.42 Notice of proposed exemption.
 - 2570.43 Notification of interested persons by applicant.
 - 2570.44 Withdrawal of exemption applications.
 - 2570.45 Requests for reconsideration.
 - 2570.46 Hearings in opposition to exemptions from restrictions on fiduciary self-dealing.
 - 2570.47 Other hearings.
 - 2570.48 Decision to grant exemptions.
 - 2570.49 Limits on the effect of exemptions.

- Sec.
- 2570.50 Revocation or modification of exemptions.
 - 2570.51 Public inspection and copies.
 - 2570.52 Effective date.

Subpart B—Procedures for Filing and Processing Prohibited Transaction Exemption Applications

§ 2570.30 Scope of rules.

(a)(1) The rules of procedure set forth in this subpart apply to all applications for exemption which the Department has authority to issue under:

(i) Section 408(a) of the Employee Retirement Income Security Act of 1974 (ERISA);

(ii) Section 4975(c)(2) of the Internal Revenue Code of 1986 (the Code) (see Reorganization Plan No. 4 of 1978); or

(iii) The Federal Employees' Retirement System Act of 1986 (FERSA) (5 U.S.C. 8477(c)(3)).

(b) The Department will generally treat any exemption application which is filed solely under section 408(a) of ERISA or solely under section 4975(c)(2) of the Code as an exemption filed under both section 408(a) and section 4975(c)(2) if it relates to a transaction that would be prohibited both by ERISA and by the corresponding provisions of the Code.

(c) The procedures set forth in this subpart represent the exclusive means by which the Department will issue administrative exemptions. The Department will not issue exemptions upon oral request alone. Likewise, the Department will not grant exemptions orally. An applicant for an administrative exemption may request and receive oral advice from Department employees in preparing an exemption application. However, such advice does not constitute part of the administrative record and is not binding on the Department in its processing of an exemption application or in its examination or audit of a plan.

§ 2570.31 Definitions.

For purposes of these procedures, the following definitions apply:

- (a) An *affiliate* of a person means—
- (1) Any person directly or indirectly through one or more intermediaries, controlling, controlled by, or under common control with the person;
 - (2) Any director of, relative of, or partner in, any such person;
 - (3) Any corporation, partnership, trust, or unincorporated enterprise of which such person is an officer, director, or a 5 percent or more partner or owner; and
 - (4) Any employee or officer of the person who—

(i) Is highly compensated (as defined in section 4975(e)(2)(H) of the Code), or

(ii) Has direct or indirect authority, responsibility, or control regarding the custody, management, or disposition of plan assets.

(b) A *class exemption* is an administrative exemption, granted under section 408(a) of ERISA, section 4975(c)(2) of the Code, and/or 5 U.S.C. 8477(c)(3), which applies to any parties in interest within the class of parties in interest specified in the exemption who meet the conditions of the exemption.

(c) *Department* means the U.S. Department of Labor and includes the Secretary of Labor or his delegate exercising authority with respect to prohibited transaction exemptions to which this subpart applies.

(d) *Exemption transaction* means the transaction or transactions for which an exemption is requested.

(e) An *individual exemption* is an administrative exemption, granted under section 408(a) of ERISA, section 4975(c)(2) of the Code, and/or 5 U.S.C. 8477(c)(3), which applies only to the specific parties in interest named or otherwise defined in the exemption.

(f) A *party in interest* means a person described in section 3(14) of ERISA or 5 U.S.C. 8477(a)(4) and includes a *disqualified person*, as defined in section 4975(e)(2) of the Code.

(g) *Pooled fund* means an account or fund for the collective investment of the assets of two or more unrelated plans, including (but not limited to) a pooled separate account maintained by an insurance company and a common or collective trust fund maintained by a bank or similar financial institution.

§ 2570.32 Persons who may apply for exemptions.

(a) The Department may initiate exemption proceedings on its own motion. In addition, the Department will initiate exemption proceedings upon the application of:

(1) Any party in interest to a plan who is or may be a party to the exemption transaction;

(2) Any plan which is a party to the exemption transaction; or

(3) In the case of an application for an exemption covering a class of parties in interest or a class of transactions, in addition to any person described in paragraphs (a)(1) and (a)(2) of this section, an association or organization representing parties in interest who may be parties to the exemption transaction.

(b) An application by or for a person described in paragraph (a) of this section, may be submitted by the applicant or by his authorized representatives. If the application is submitted by a representative of the

applicant, the representative must submit proof of his authority in the form of:

- (1) A power of attorney; or
- (2) A written certification from the applicant that the representation is authorized.

(c) If the authorized representative of an applicant submits an application for an exemption to the Department together with proof of his authority to file the application as required by paragraph (b) of this section, the Department will direct all correspondence and inquiries concerning the application to the representative unless requested to do otherwise by the applicant.

§ 2570.33 Applications the Department will not ordinarily consider.

(a) The Department will not ordinarily consider:

(1) An application that fails to include all the information required by §§ 2570.34 and 2570.35 or otherwise fails to conform to the requirements of these procedures; or

(2) An application for exemption involving a transaction or transactions which are the subject of an investigation for possible violations of part 1 or 4 of subtitle B of title I of ERISA or section 8477 or 8478 of FERSA or an application for an exemption involving a party in interest who is the subject of such an investigation or who is a defendant in an action by the Department or the Internal Revenue Service to enforce the above-mentioned provisions of ERISA or FERSA.

(b) If for any reason the Department decides not to consider an exemption application, it will inform the applicant of that decision in writing and of the reasons therefor.

(c) An application for an individual exemption relating to a specific transaction or transactions will ordinarily not be considered separately if the Department is considering a class exemption relating to the same type of transaction or transactions.

§ 2570.34 Information to be included in every exemption application.

(a) All applications for exemptions must contain the following information:

(1) The name(s) of the applicant(s);

(2) A detailed description of the exemption transaction and the parties in interest for whom an exemption is requested, including a description of any larger integrated transaction of which the exemption transaction is a part;

(3) Whether the affected plan(s) and any parties in interest will be represented by the same person with regard to the exemption application;

(4) Reasons a plan would have for entering into the exemption transaction;

(5) The prohibited transaction provisions from which exemptive relief is requested and the reason why the transaction would violate each such provision;

(6) Whether the exemption transaction is customary for the industry or class involved;

(7) Whether the exemption transaction is or has been the subject of an investigation or enforcement action by the Department or by the Internal Revenue Service; and

(8) The hardship or economic loss, if any, which would result to the person or persons on behalf of whom the exemption is sought, to affected plans, and to their participants and beneficiaries from denial of the exemption.

(b) All applications for exemption must also contain the following:

(1) A statement explaining why the requested exemption would be—

(i) Administratively feasible;

(ii) In the interests of affected plans and their participants and beneficiaries; and

(iii) Protective of the rights of participants and beneficiaries of affected plans.

(2) With respect to the notification of interested persons required by § 2570.43:

(i) A description of the interested persons to whom the applicant intends to provide notice;

(ii) The manner in which the applicant will provide such notice; and

(iii) An estimate of the time the applicant will need to furnish notice to all interested persons following publication of a notice of the proposed exemption in the *Federal Register*.

(3) If an advisory opinion has been requested with respect to any issue relating to the exemption transaction—

(i) A copy of the letter concluding the Department's action on the advisory opinion request; or

(ii) If the Department has not yet concluded its action on the request:

(A) A copy of the request or the date on which it was submitted together with the Department's correspondence control number as indicated in the acknowledgment letter; and

(B) An explanation of the effect of a favorable advisory opinion upon the exemption transaction.

(4) If the application is to be signed by anyone other than an individual party in interest seeking exemptive relief on his own behalf, a statement which—

(i) Identifies the individual who will be signing the application and his position with the applicant; and

(ii) Explains briefly the basis of his familiarity with the matters discussed in the application.

(5)(i) A declaration in the following form: Under penalty of perjury, I declare that I am familiar with the matters discussed in this application and, to the best of my knowledge and belief, the representations made in this application are true and correct.

(ii) This declaration must be dated and signed by:

(A) The applicant himself in the case of an individual party in interest seeking exemptive relief on his own behalf;

(B) A corporate officer or partner where the applicant is a corporation or partnership;

(C) A designated officer or official where the applicant is an association, organization or other unincorporated enterprise;

(D) The plan fiduciary who has the authority, responsibility, and control with respect to the exemption transaction where the applicant is a plan.

(iii) Specialized statements from third-party experts, such as appraisals or analyses of market conditions, submitted to support an application for exemption must also be accompanied by a statement of consent from such expert acknowledging that he or she knows that his or her statement is being submitted to the Department as part of an application for exemption.

(iv) For those applications requiring an independent fiduciary to represent the plan in the exemption transaction, each statement submitted by said independent fiduciary must contain a signed and dated declaration under penalty of perjury that, to the best of said fiduciary's knowledge and belief, the representations made in such statement are true and correct.

(c) An application for exemption may also include a draft of the requested exemption which defines the transaction and parties in interest for which exemptive relief is sought and the specific conditions under which the exemption would apply.

§ 2570.35 Information to be included in applications for individual exemptions only.

(a) Except as provided in paragraph (c) of this section, every application for an individual exemption must include, in addition to the information specified in § 2570.34, the following information:

(1) The name, address, telephone number, and type of plan or plans to which the requested exemption applies;

(2) The Employer Identification Number (EIN) and the plan number (PN) used by such plan or plans in all

reporting and disclosure required by the Department;

(3) Whether any plan or trust affected by the requested exemption has ever been found by the Department, the Internal Revenue Service, or by a court to have violated the exclusive benefit rule of section 401(a) of the Code, or to have engaged in a prohibited transaction under section 503(b) of the Code or corresponding provisions of prior law, section 4975(c)(1) of the Code, section 406 or 407(a) of ERISA, or 5 U.S.C. 8477(c)(3);

(4) Whether any relief under section 408(a) of ERISA, section 4975(c)(2) of the Code, or 5 U.S.C. 8477(c)(3) has been requested by, or provided to, the applicant or any of the parties on behalf of whom the exemption is sought and, if so, the exemption application number or the prohibited transaction exemption number;

(5) Whether the applicant or any of the parties in interest involved in the exemption transaction is currently, or has been within the last five years, a defendant in any lawsuit or criminal action concerning such person's conduct as a fiduciary or party in interest with respect to any plan;

(6) Whether the applicant or any of the parties in interest involved in the exemption transaction has, within the last 13 years, been convicted of any crime described in section 411 of ERISA;

(7) Whether, within the last five years, any plan affected by the exemption transaction or any party in interest involved in the exemption transaction has been under investigation or examination by, or has been engaged in litigation or a continuing controversy with, the Department, the Internal Revenue Service, the Justice Department, the Pension Benefit Guaranty Corporation, or the Federal Retirement Thrift Investment Board involving compliance with provisions of ERISA, provisions of the Code relating to employee benefit plans, or provisions of FERSA relating to the Federal Thrift Savings Fund. If so, the applicant must submit copies of all correspondence with the Department, the Internal Revenue Service, the Justice Department, the Pension Benefit Guaranty Corporation, or the Federal Retirement Thrift Investment Board regarding the substantive issues involved in the investigation, examination, litigation, or controversy which relate to compliance with the provisions of part 1 or 4 of subtitle B of title I of ERISA, section 4975 of the Code, or section 8477 or 8478 of FERSA. For this purpose, the term "examination" does not include routine

audits conducted by the Department pursuant to section 8477(g) of FERSA;

(8) Whether any plan affected by the requested exemption has experienced a reportable event under section 4043 of ERISA;

(9) Whether a notice of intent to terminate has been filed under section 4041 of ERISA respecting any plan affected by the requested exemption;

(10) Names, addresses, and taxpayer identifying numbers of all parties in interest involved in the subject transaction;

(11) The estimated number of participants and beneficiaries in each plan affected by the requested exemption as of the date of the application;

(12) The percentage of the fair market value of the total assets of each affected plan that is involved in the exemption transaction;

(13) Whether the exemption transaction has been consummated or will be consummated only if the exemption is granted;

(14) If the exemption transaction has already been consummated:

(i) The circumstances which resulted in plan fiduciaries causing the plan(s) to engage in the subject transaction before obtaining an exemption from the Department;

(ii) Whether the transaction has been terminated;

(iii) Whether the transaction has been corrected as defined in Code section 4975(f)(5);

(iv) Whether Form 5330, Return of Excise Taxes Related to Employee Benefit Plans, has been filed with the Internal Revenue Service with respect to the transaction; and

(v) Whether any excise taxes due under section 4975(a) and (b) of the Code by reason of the transaction have been paid.

(15) The name of every person who has investment discretion over any assets involved in the exemption transaction and the relationship of each such person to the parties in interest involved in the exemption transaction and the affiliates of such parties in interest;

(16) Whether or not the assets of the affected plan(s) are invested in loans to any party in interest involved in the exemption transaction, in property leased to any such party in interest, or in securities issued by any such party in interest, and, if such investments exist, a statement for each of these three types of investments which indicates:

(i) The type of investment to which the statement pertains;

(ii) The aggregate fair market value of all investments of this type as reflected in the plan's most recent annual report;

(iii) The approximate percentage of the fair market value of the plan's total assets as shown in such annual report that is represented by all investments of this type; and

(iv) The statutory or administrative exemption covering these investments, if any.

(17) The approximate aggregate fair market value of the total assets of each affected plan;

(18) The person(s) who will bear the costs of the exemption application and of notifying interested persons; and

(19) Whether an independent fiduciary is or will be involved in the exemption transaction and, if so, the names of the persons who will bear the cost of the fee payable to such fiduciary.

(b) Each application for an individual exemption must also include:

(1) True copies of all contracts, deeds, agreements, and instruments, as well as relevant portions of plan documents, trust agreements, and any other documents bearing on the exemption transaction;

(2) A discussion of the facts relevant to the exemption transaction that are reflected in these documents and an analysis of their bearing on the requested exemption; and

(3) A copy of the most recent financial statements of each plan affected by the requested exemption.

(c) *Special rule for applications for individual exemption involving pooled funds:*

(1) The information required by paragraphs (a) (8) through (12) of this section is not required to be furnished in an application for individual exemption involving one or more pooled funds;

(2) The information required by paragraphs (a) (1) through (7) and (a) (13) through (19) of this section and by paragraphs (b) (1) through (3) of this section must be furnished by reference to the pooled fund, rather than to the plans participating therein. (For purposes of this paragraph, the information required by paragraph (a) (16) of this section relates solely to other pooled fund transactions with, and investments in, parties in interest involved in the exemption transaction which are also sponsors of plans which invest in the pooled fund.);

(3) The following information must also be furnished—

(i) The estimated number of plans that are participating (or will participate) in the pooled fund; and

(ii) The minimum and maximum limits imposed by the pooled fund (if any) on

the portion of the total assets of each plan that may be invested in the pooled fund.

(4) Additional requirements for applications for individual exemption involving pooled funds in which certain plans participate.

(i) This paragraph applies to any application for individual exemption involving one or more pooled funds in which any plan participating therein—

(A) Invests an amount which exceeds 20% of the total assets of the pooled fund, or

(B) Covers employees of:

(I) The party sponsoring or maintaining the pooled fund, or any affiliate of such party, or

(II) Any fiduciary with investment discretion over the pooled fund's assets, or any affiliate of such fiduciary.

(ii) The exemption application must include, with respect to each plan described in paragraph (c)(4)(i) of this section, the information required by paragraphs (a) (1) through (3), (a) (5) through (7), (a) (10), (a) (12) through (16) and, (a) (18) and (19), of this section. The information required by this paragraph must be furnished by reference to the plan's investment in the pooled fund (e.g., the names, addresses and taxpayer identifying numbers of all fiduciaries responsible for the plan's investment in the pooled fund [§ 2570.35(a) (10)], the percentage of the assets of the plan invested in the pooled fund [§ 2570.35(a) (12)], whether the plan's investment in the pooled fund has been consummated or will be consummated only if the exemption is granted [§ 2570.35(a) (13)], etc.).

(iii) The information required by paragraph (c) (4) of this section is in addition to the information required by paragraphs (c) (2) and (3) of this section relating to information furnished by reference to the pooled fund.

(5) The special rule and the additional requirements described in paragraphs (c) (1) through (4) of this section do not apply to an individual exemption request solely for the investment by a plan in a pooled fund. Such an application must provide the information required by paragraphs (a) and (b) of this section.

§ 2570.36 Where to file an application.

The Department's prohibited transaction exemption program is administered by the Pension and Welfare Benefits Administration (PWBA). Any exemption application governed by these procedures should be mailed or otherwise delivered to: Exemption Application, PWBA, Office of Exemption Determinations, Division of Exemptions, U.S. Department of

Labor, 200 Constitution Avenue NW., Washington, DC 20210.

§ 2570.37 Duty to amend and supplement exemption applications.

(a) During the pendency of his exemption application, an applicant must promptly notify the Division of Exemptions in writing if he discovers that any material fact or representation contained in his application or in any documents or testimony provided in support of the application is inaccurate, if any such fact or representation changes during this period, or if, during the pendency of the application, anything occurs that may affect the continuing accuracy of any such fact or representation.

(b) If, at any time during the pendency of his exemption application, an applicant or any other party in interest who would participate in the exemption transaction becomes the subject of an investigation or enforcement action by the Department, the Internal Revenue Service, the Justice Department, the Pension Benefit Guaranty Corporation, or the Federal Retirement Thrift Investment Board involving compliance with provisions of ERISA, provisions of the Code relating to employee benefit plans, or provisions of FERSA relating to the Federal Thrift Savings Fund, the applicant must promptly notify the Division of Exemptions.

(c) The Department may require an applicant to provide documentation it considers necessary to verify any statements contained in the application or in supporting materials or documents.

§ 2570.38 Tentative denial letters.

(a) If, after reviewing an exemption file, the Department concludes that it will not grant the exemption, it will notify the applicant in writing of its tentative denial of the exemption application. At the same time, the Department will provide a short statement of the reasons for its tentative denial.

(b) An applicant will have 20 days from the date of a tentative denial letter to request a conference under § 2570.40 of these procedures and/or to notify the Department of its intent to submit additional information in writing under § 2570.39 of these procedures. If the Department does not receive a request for a conference or a notification of intent to submit additional information within that time, it will issue a final denial letter pursuant to § 2570.41.

(c) The Department need not issue a tentative denial letter to an applicant before issuing a final denial letter where the Department has conducted a hearing on the exemption pursuant to either

§ 2570.46 or § 2570.47 of these procedures.

§ 2570.39 Opportunities to submit additional information.

(a) An applicant may notify the Department of its intent to submit additional information supporting an exemption application either by telephone or by letter sent to the address furnished in the applicant's tentative denial letter. At the same time, the applicant should indicate generally the type of information that he will submit.

(b) An applicant will have 30 days from the date of the notification discussed in paragraph (a) of this section to submit in writing all of the additional information he intends to provide in support of his application. All such information must be accompanied by a declaration under penalty of perjury attesting to the truth and correctness of the information provided, which is dated and signed by a person qualified under § 2570.34(b)(5) of these procedures to sign such a declaration.

(c) If, for reasons beyond his control, an applicant is unable to submit in writing all the additional information he intends to provide in support of his application within the 30-day period described in paragraph (b) of this section, he may request an extension of time to furnish the information. Such requests must be made before the expiration of the 30-day period and will be granted only in unusual circumstances and for limited periods of time.

(d) If an applicant is unable to submit all of the additional information he intends to provide in support of his exemption application within the 30-day period specified in paragraph (b) of this section, or within any additional period of time granted to him pursuant to paragraph (c) of this section, the applicant may withdraw the exemption application before expiration of the applicable time period and reinstate it later pursuant to § 2570.44 of these procedures.

(e) The Department will issue, without further notice, a final denial letter denying the requested exemption pursuant to § 2570.41 of these procedures where—

(1) The Department has not received the additional information that the applicant indicated he would submit within the 30-day period described in paragraph (b) of this section, or within any additional period of time granted pursuant to paragraph (c) of this section;

(2) The applicant did not request a conference pursuant to § 2570.38(b) of these procedures; and

(3) The applicant has not withdrawn his application as permitted by paragraph (d) of this section.

§ 2570.40 Conferences.

(a) Any conference between the Department and an applicant pertaining to a requested exemption will be held in Washington, DC, except that a telephone conference will be held at the applicant's request.

(b) An applicant is entitled to only one conference with respect to any exemption application. An applicant will not be entitled to a conference, however, where the Department has held a hearing on the exemption under either § 2570.46 or § 2570.47 of these procedures.

(c) Insofar as possible, conferences will be scheduled as joint conferences with all applicants present where:

(1) More than one applicant has requested an exemption with respect to the same or similar types of transactions;

(2) The Department is considering the applications together as a request for a class exemption;

(3) The Department contemplates not granting the exemption; and

(4) More than one applicant has requested a conference.

(d) The Department will attempt to schedule a conference under this section for a mutually convenient time during the 45-day period following the later of—

(1) The date the Department receives the applicant's request for a conference, or

(2) The date the Department notifies the applicant, after reviewing additional information submitted pursuant to § 2570.39, that it is still not prepared to propose the requested exemption.

If the applicant is unable to attend a conference at any of the times proposed by the Department during this 45-day period or if the applicant fails to appear for a scheduled conference, he will be deemed to have waived his right to a conference unless circumstances beyond his control prevent him from scheduling a conference or attending a scheduled conference within this period.

(e) Within 20 days after the date of any conference held under this section, the applicant may submit to the Department a written record of any additional data, arguments, or precedents discussed at the conference but not previously or adequately presented in writing.

§ 2570.41 Final denial letters.

(a) The Department will issue a final denial letter denying a requested exemption where:

(1) The conditions for issuing a final denial letter specified in § 2570.38(b) or § 2570.39(e) of these procedures are satisfied;

(2) After issuing a tentative denial letter under § 2570.38 of this part and considering the entire record in the case, including all written information submitted pursuant to § 2570.39 and § 2570.40(e) of these procedures, the Department decides not to propose an exemption or to withdraw an exemption already proposed; or

(3) After proposing an exemption and conducting a hearing on the exemption under either § 2570.46 or § 2570.47 of this part and after considering the entire record in the case, including the record of the hearing, the Department decides to withdraw the proposed exemption.

§ 2570.42 Notice of proposed exemption.

If the Department tentatively decides, based on all the information submitted by an applicant, that the exemption should be granted, it will publish a notice of proposed exemption in the *Federal Register*. The notice will:

(a) Explain the exemption transaction and summarize the information received by the Department in support of the exemption;

(b) Specify any conditions under which the exemption is proposed;

(c) Inform interested persons of their right to submit comments in writing to the Department relating to the proposed exemption and establish a deadline for receipt of such comments;

(d) If the proposed exemption includes relief from the prohibitions of section 406(b) of ERISA, section 4975(c)(1) (E) or (F) of the Code, or section 8477(c)(2) of FERSA, inform interested persons of their right to request a hearing under § 2570.46 of this part and establish a deadline for receipt of requests for such hearings.

§ 2570.43 Notification of interested persons by applicant.

(a) If, as set forth in the exemption application, the notification that an applicant intends to provide to interested persons upon publication of a notice of proposed exemption in the *Federal Register* is inadequate, the Department will so inform the applicant and will secure the applicant's written agreement to provide what it considers to be adequate notice under the circumstances.

(b) If a notice of proposed exemption is published in the *Federal Register* in accordance with § 2570.42 of this part,

the applicant must notify interested persons of the pendency of the exemption in the manner and time period specified in the application or in any superseding agreement with the Department. Any such notification must include:

(1) A copy of the notice of proposed exemption; and

(2) A supplemental statement in the following form:

You are hereby notified that the United States Department of Labor is considering granting an exemption from the prohibited transaction restrictions of the Employee Retirement Income Security Act of 1974, the Internal Revenue Code of 1986, or the Federal Employees' Retirement System Act of 1986. The exemption under consideration is explained in the enclosed Notice of Proposed Exemption. As a person who may be affected by this exemption, you have the right to comment on the proposed exemption by [date].¹ If you may be adversely affected by the grant of the exemption, you also have the right to request a hearing on the exemption by [date].²

Comments or requests for a hearing should be addressed to: Office of Exemption Determinations, Pension and Welfare Benefits Administration, room _____, U.S. Department of Labor, 200 Constitution Avenue NW., Washington, DC 20210, ATTENTION: Application No. _____.⁴

The Department will make no final decision on the proposed exemption until it reviews all comments received in response to the enclosed notice. If the Department decides to hold a hearing on the exemption before making its final decision, you will be notified of the time and place of the hearing.

(c) The method used to furnish notice to interested persons must be reasonably calculated to ensure that interested persons actually receive the notice. In all cases, personal delivery and delivery by first-class mail will be considered reasonable methods of furnishing notice.

(d) After furnishing the notice required by this section, an applicant must provide the Department with a statement confirming that notice was furnished to the persons and in the manner and time designated in its exemption application or in any

¹ The applicant will write in this space the date of the last day of the time period specified in the notice of proposed exemption.

² To be added in the case of an exemption that provides relief from section 406(b) of ERISA or corresponding sections of the Code or FERSA.

³ The applicant will fill in the room number of the Division of Exemptions. As of the date of this final regulation, the room number of the Division of Exemptions was N-5671.

⁴ The applicant will fill in the exemption application number, which is stated in the notice of proposed exemption, as well as in all correspondence from the Department to the applicant regarding the application.

superseding agreement with the Department. This statement must be accompanied by a declaration under penalty of perjury attesting to the truth of the information provided in the statement and signed by a person qualified under § 2570.34(b)(5) of these procedures to sign such a declaration. No exemption will be granted until such a statement and its accompanying declaration have been furnished to the Department.

§ 2570.44 Withdrawal of exemption applications.

(a) An applicant may withdraw his application for an exemption at any time by informing the Department, either orally or in writing, of his intent to withdraw.

(b) Upon receiving an applicant's notice of intent to withdraw an application for an individual exemption, the Department will confirm by letter the applicant's withdrawal of the application and will terminate all proceedings relating to the application. If a notice of proposed exemption has been published in the *Federal Register*, the Department will publish a notice withdrawing the proposed exemption.

(c) Upon receiving an applicant's notice of intent to withdraw an application for a class exemption or for an individual exemption that is being considered with other applications as a request for a class exemption, the Department will inform any other applicants for the exemption of the withdrawal. The Department will continue to process other applications for the same exemption. If all applicants for a particular class exemption withdraw their applications, the Department may either terminate all proceedings relating to the exemption or propose the exemption on its own motion.

(d) If, following the withdrawal of an exemption application, an applicant decides to reapply for the same exemption, he may submit a letter to the Department requesting that the application be reinstated and referring to the application number assigned to the original application. If, at the time the original application was withdrawn, any additional information to be submitted to the Department under § 2570.39 of these procedures was outstanding, that information must accompany the letter requesting reinstatement of the application. However, the applicant need not resubmit information previously furnished to the Department in connection with a withdrawn application unless reinstatement of the

application is requested more than two years after the date of its withdrawal.

(e) Any request for reinstatement of a withdrawn application submitted in accordance with paragraph (d) of this section, will be granted by the Department, and the Department will take whatever steps remained at the time the application was withdrawn to process the application.

§ 2570.45 Requests for reconsideration.

(a) The Department will entertain one request for reconsideration of an exemption application that has been finally denied pursuant to § 2570.41 (a)(2) or (a)(3) of this part if the applicant presents in support of the application significant new facts or arguments, which, for good reason, could not have been submitted for the Department's consideration during its initial review of the exemption application.

(b) A request for reconsideration of a previously denied application must be made within 180 days after the issuance of the final denial letter and must be accompanied by a copy of the Department's final letter denying the exemption and a statement setting forth the new information and/or arguments that provide the basis for reconsideration.

(c) A request for reconsideration must also be accompanied by a declaration under penalty of perjury attesting to the truth of the new information provided, which is signed by a person qualified under § 2570.34(b)(5) of these procedures to sign such a declaration.

(d) If, after reviewing a request for reconsideration, the Department decides that the facts and arguments presented do not warrant reversal of its original decision to deny the exemption, it will send a letter to the applicant reaffirming that decision.

(e) If, after reviewing a request for reconsideration, the Department decides, based on the new facts and arguments submitted, to reconsider its denial letter, it will notify the applicant of its intent to reconsider the application in light of the new information presented. The Department will then take whatever steps remained at the time it issued its final denial letter to process the exemption application.

(f) If, at any point during its subsequent processing of the application, the Department decides again that the exemption is unwarranted, it will issue a letter affirming its final denial.

§ 2570.46 Hearings in opposition to exemptions from restrictions on fiduciary self-dealing.

(a) Any interested person who may be adversely affected by an exemption which the Department proposes to grant from the restrictions of section 406(b) of ERISA, section 4975(c)(1)(E) or (F) of the Code, or section 8477(c)(2) of FERSA may request a hearing before the Department within the period of time specified in the *Federal Register* notice of the proposed exemption. Any such request must state:

(1) The name, address, and telephone number of the person making the request;

(2) The nature of the person's interest in the exemption and the manner in which the person would be adversely affected by the exemption; and

(3) A statement of the issues to be addressed and a general description of the evidence to be presented at the hearing.

(b) The Department will grant a request for a hearing made in accordance with paragraph (a) of this section where a hearing is necessary to fully explore material factual issues identified by the person requesting the hearing. However, the Department may decline to hold a hearing where:

(1) The request for the hearing does not meet the requirements of paragraph (a);

(2) The only issues identified for exploration at the hearing are matters of law; or

(3) The factual issues identified can be fully explored through the submission of evidence in written form.

(c) An applicant for an exemption must notify interested persons in the event that the Department schedules a hearing on the exemption. Such notification must be given in the form, time, and manner prescribed by the Department. Ordinarily, however, adequate notification can be given by providing to interested persons a copy of the notice of hearing published by the Department in the *Federal Register* within 10 days of its publication, using any of the methods approved in § 2570.43(c) of this part.

(d) After furnishing the notice required by paragraph (c) of this section, an applicant must submit a statement confirming that notice was given in the form, manner, and time prescribed. This statement must be accompanied by a declaration under penalty of perjury attesting to the truth of the information provided in the statement, which is signed by a person qualified under § 2570.34(b)(5) of these procedures to sign such a declaration.

§ 2570.47 Other hearings.

(a) In its discretion, the Department may schedule a hearing on its own motion where it determines that issues relevant to the exemption can be most fully or expeditiously explored at a hearing.

(b) An applicant for an exemption must notify interested persons of any hearing on an exemption scheduled by the Department in the manner described in § 2570.46(c). In addition, the applicant must submit a statement subscribed as true under penalty of perjury like that required in § 2570.46(d).

§ 2570.48 Decision to grant exemptions.

(a) If, after considering all the facts and representations submitted by an applicant in support of an exemption application, all the comments received in response to a notice of proposed exemption, and the record of any hearing held in connection with the proposed exemption, the Department determines that the exemption should be granted, it will publish a notice in the *Federal Register* granting the exemption.

(b) A *Federal Register* notice granting an exemption will summarize the transaction or transactions for which exemptive relief has been granted and will specify the conditions under which such exemptive relief is available.

§ 2570.49 Limits on the effect of exemptions.

(a) An exemption does not take effect or protect parties in interest from liability with respect to the exemption transaction unless the material facts and representations contained in the application and in any materials and documents submitted in support of the application were true and complete.

(b) An exemption is effective only for the period of time specified and only under the conditions set forth in the exemption.

(c) Only the specific parties to whom an exemption grants relief may rely on the exemption. If the notice granting an exemption does not limit exemptive relief to specific parties, all parties to the exemption transaction may rely on the exemption.

§ 2570.50 Revocation or modification of exemptions.

(a) If, after an exemption takes effect, changes in circumstances, including changes in law or policy, occur which call into question the continuing validity of the Department's original conclusions concerning the exemption, the Department may take steps to revoke or modify the exemption.

(b) Before revoking or modifying an exemption, the Department will publish a notice of its proposed action in the *Federal Register* and provide interested persons with an opportunity to comment on the proposed revocation or modification. In addition, the Department will give the applicant at least 30 days notice in writing of the proposed revocation or modification and the reasons therefor and will provide the applicant with the opportunity to comment on the revocation or modification.

(c) Ordinarily the revocation or modification of an exemption will have prospective effect only.

§ 2570.51 Public inspection and copies.

(a) The administrative record of each exemption application will be open to public inspection and copying at the Public Disclosure Branch, PWBA, U.S.

Department of Labor, 200 Constitution Avenue, NW., Washington, DC 20210.

(b) Upon request, the staff of the Public Disclosure Branch will furnish photocopies of an administrative record, or any specified portion of that record, for a specified charge per page.

§ 2570.52 Effective Date.

This regulation is effective with respect to all applications for exemptions filed with the Department under section 408(a) of ERISA, section 4975(c)(2) of the Code, or 5 U.S.C. 8477(c)(3) at any time on or after September 10, 1990. Applications for exemptions under section 408(a) of ERISA and/or section 4975 of the Code filed before September 10, 1990, are governed by ERISA Procedure 75-1. Applications for exemption under 5 U.S.C. 8477(c)(3) filed before September 10, 1990, but after December 29, 1988 are governed by part 2585 of chapter XXV of title 29 of the *Code of Federal Regulations*, (section 29 CFR part 2585 as revised July 1, 1990). Applications under 5 U.S.C. 8477(c)(3) filed before December 29, 1988 are governed by ERISA Procedure 75-1.

PART 2585—[REMOVED]

3. The regulations in part 2585 of chapter XXV of title 29 of the Code of Federal Regulations are removed.

Signed at Washington, DC, this 27th day of July, 1990.

David G. Ball,

Assistant Secretary for Pension and Welfare Benefits, U.S. Department of Labor.

[FR Doc. 90-18443 Filed 8-9-90; 8:45am]

BILLING CODE 4510-29-M

[The page contains extremely faint, illegible text, likely bleed-through from the reverse side. The text is organized into several columns and paragraphs, but no specific words or phrases can be discerned.]

Registered

Friday
August 10, 1990

Part V

Department of Transportation

Federal Aviation Administration

14 CFR Parts 11, 21, 23, 25, 33, 34, 43,
45, 91

**Fuel Venting and Exhaust Emission
Requirements for Turbine Engine
Powered Airplanes; Final Rule**

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR parts 11, 21, 23, 25, 33, 34, 43, 45, 91

[Docket No. 25613; Amdt. Nos. 11-34, 21-68, 23-40, 25-70, 33-14, 43-33, 45-20, 91-218]

RIN 2120-AC62

Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This final rule codifies as new part 34 all of the applicable aircraft engine fuel venting and exhaust emission requirements of Special Federal Aviation Regulation (SFAR) 27-5, and the test procedures specified under the regulations implementing the Clean Air Act. This rule consolidates all of the requirements and test procedures into this part, and inserts into other affected parts the requirements to comply with new part 34. New part 34 does not alter any of the requirements specified under SFAR 27-5 or the regulations implementing the Clean Air Act.

EFFECTIVE DATES: This regulation is effective September 10, 1990. The incorporation by reference of certain publications listed in the regulations was previously approved by the Director of the Federal Register on November 22, 1983 (48 FR 56740, December 23, 1983).

FOR FURTHER INFORMATION CONTACT: Harvey Van Wyen, Research and Engineering Branch (AEE-110), Office of Environment and Energy, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591, Telephone: (202) 267-3558.

SUPPLEMENTARY INFORMATION: This rule replaces SFAR 27-5 with a new Federal Aviation Regulation part 34 as authorized by section 232 of the Clean Air Act, as amended (42 U.S.C. 7401) (the Act) and by the authority delegated to the Administrator of the FAA by the Secretary of Transportation. This rule also amends references to SFAR 27-5 in other parts of the FARs (parts 11, 21, 43, 45, and 91). References to new part 34 will be added to parts 23, 25, and 33 of the FARs. This codification of SFAR 27-5 and 40 CFR part 87 is based on Notice No. 88-9 (53 FR 18530, May 23, 1988). Comments were invited. All comments received have been considered in the issuance of this final rule.

Synopsis of the Proposal

Overview

When the Environmental Protection Agency (EPA) originally issued 40 CFR part 87, Control of Air Pollution from Aircraft and Aircraft Engines; Emission Standards and Test Procedures in 1973, it was recognized that some portions of the standards could be implemented in a very short time period while other portions would require a much longer time period for development and testing. In accordance with section 232 of the Clean Air Act, as amended (42 U.S.C. 7401), the FAA proceeded to promulgate compliance regulations for the near-term requirements in the form of a Special Federal Aviation Regulation, SFAR 27-5. Subsequent to the original issuance of 40 CFR part 87, the EPA has recognized that some of the longer-term requirements were either unneeded or practically unattainable. Those longer-term requirements, originally scheduled to become effective in 1978, have been extensively revised by the EPA. Revised 40 CFR part 87 now contains all current aircraft and aircraft engine emission standards. Under the requirement of section 232 of the Clean Air Act Amendments of 1970, the FAA has promulgated, in SFAR 27-5, compliance regulations for all of the standards in 40 CFR part 87.

By this rulemaking, the FAA will continue to comply with section 232 of the Clean Air Act Amendments of 1970 by establishing a new part 34 to 14 CFR containing all of the compliance regulations for fuel venting and engine exhaust emissions. This rule also revises other affected parts to require compliance with part 34. Since SFAR 27-5 and its amendments were issued, they have, by definition, been considered temporary, and their exact status has been confusing to the parties directly or indirectly affected by the regulations. The other parts directly affected by SFAR 27-5 have heretofore referenced only SFAR 27-5 and the reader has been required to review SFAR 27-5 in its entirety in order to determine its effect on other parts. The FAA, with this final rule, codifies the compliance regulations in a single part of the Federal Aviation Regulations, and revises the other affected parts accordingly.

The provisions of 40 CFR part 87 are applicable to each individual aircraft gas turbine engine of the classes, and as of dates, specified in that part. Compliance would require exhaust emission testing of each individual engine that is subject to the requirements of 40 CFR part 87. The EPA has recognized in the preamble to 40

CFR part 87, and specifically in § 87.89, that testing each individual engine would be excessively costly.

The EPA concluded that it was necessary to develop a practical interpretation of the requirement for demonstrated compliance by each individual engine and to substitute a preproduction certification program as a compliance procedure in place of compliance testing. The promulgation of such a preproduction certification compliance program has been delegated to the FAA subject to the concurrence of the Administrator of the EPA. The FAA consulted extensively with the EPA on this matter. The EPA concluded that an acceptable preproduction certification compliance program must demonstrate that, at minimum, with 90 percent confidence, 95 percent of the engines would meet the gaseous emission standards, and with 90 percent confidence, every engine would meet the smoke standards. The International Civil Aviation Organization (ICAO), in its Standards and Recommended Practices for Aircraft Engine Emissions, adopted a similar preproduction certification compliance procedure based upon a composite of historical engine-to-engine variability. Since the EPA stressed the desirability of commonality with ICAO, the FAA, with the concurrence of the EPA, adopted the compliance procedure defined in Appendix 6 to ICAO Annex 16, Volume II—Aircraft Engine Emissions, First Edition, June 1981.

The FAA solicited comments and recommendations concerning equivalent procedures in a Notice of Proposed Rulemaking (53 FR 18530, May 23, 1988). No comments were received on the equivalent procedures issue. The FAA will give any future recommendation full consideration if it is accompanied by substantive supporting data demonstrating equivalency. Should an acceptable equivalent procedure be proposed, the FAA will seek EPA concurrence with that proposed equivalent procedure as an alternative compliance procedure. The FAA cannot, however, adopt any proposed compliance procedure unless it has the concurrence of the Administrator of the EPA.

Regulatory History

Under section 232 of the Clean Air Act Amendments of 1970, Public Law 91-604, the FAA is required to issue regulations that ensure compliance with all aircraft emission standards promulgated under section 231 of the Act, which are currently prescribed in 40 CFR part 87 originally issued on July 6, 1973 (38 FR

19088, July 17, 1973). Accordingly, on December 26, 1973, the FAA issued SFAR 27, (38 FR 35427, December 28, 1973). The purpose of SFAR 27 was to ensure compliance with the aircraft and aircraft engine emission standards and test procedures issued by the EPA in 40 CFR part 87.

SFAR 27, as originally issued, required compliance only with those standards and procedures in 40 CFR part 87 that were effective beginning February 1, 1974. Since its issuance, SFAR 27 has been amended seven times by the FAA. On December 23, 1974, the FAA issued SFAR 27-1 (39 FR 45008, December 30, 1974) to require compliance with the fuel venting emission standards in 40 CFR part 87 that became effective January 1, 1975. SFAR 27-2, effective January 1, 1976 (40 FR 55311, November 28, 1975), required compliance with smoke emissions standards in 40 CFR part 87 applicable to new and in-use aircraft turbofan or turbojet engines with a rated power of 29,000 pounds thrust or greater that are designed for operation on subsonic airplanes. SFAR 27-3 (42 FR 64876, December 29, 1977) required compliance with smoke emission standards in 40 CFR part 87 for JT3D engines manufactured on and after January 1, 1978. A fourth amendment, SFAR 27-4 (45 FR 71960, October 30, 1980), was issued to require phased compliance with smoke emission standards by in-use JT3D engines beginning on January 1, 1981, with total compliance required by January 1, 1985. Subsequently, the requirement for compliance by in-use JT3D engines was automatically deleted under the terms of SFAR 27, § 3(b), when the EPA deleted underlying requirement from 40 CFR part 87 (48 FR 2716, January 20, 1983).

On December 21, 1982, the EPA revised 40 CFR part 87 and republished the rule in its entirety (47 FR 58462, December 30, 1982). The revised rule contained a number of changes in definitions as well as new standards for smoke and unburned hydrocarbon emissions. The FAA is required by 40 CFR 87.89 to establish and approve a testing program to assure compliance with part 87 by January 1, 1984. On December 8, 1983, the FAA issued amended SFAR 27-5 (48 FR 56735, December 23, 1983) which required compliance with all of the provisions of revised 40 CFR part 87 and contained an EPA-approved testing program. The effective date of SFAR 27-5 was January 1, 1984. On October 4, 1983, the EPA issued a stay of the January 1, 1984, effective date for EPA's smoke standards, applicable to aircraft turbine engines rated below 26.7 kilonewtons

(kN) (6000 pounds) thrust in response to a petition by the General Aviation Manufacturers Association (GAMA) (48 FR 46481, October 12, 1983). On July 30, 1984, the EPA denied the GAMA petition and established an August 9, 1985 effective date for smoke standards applicable to aircraft turbine engines rated below 26.7 kN (49 FR 31873, August 9, 1984). On October 9, 1984, the EPA changed the definition of "very low production" engines in the provisions for exemptions and revised the exhaust emission test fuel specification (49 FR 41000, October 18, 1984). On March 18, 1986, the FAA amended SFAR 27-5 to correct the authority citations for petitions for exemptions to SFAR 27-5 (51 FR 10612, March 28, 1986). On September 15, 1989, the FAA amended SFAR 27-5 to reflect delegations of authority that were affected by a recent agencywide reorganization (54 FR 39288, September 25, 1989).

Discussion of Comments

A total of seven written responses containing comments were received by the FAA subsequent to the publication of Notice 88-9. All of the comments submitted to the docket have been reviewed. The proposed amendments to parts 11, 21, 23, 25, 33, 45 and 91 and the new part 34 have been revised to reflect those relevant comments and suggestions within the scope of Notice 88-9.

Many of the comments regarding technical amendments to parts 11, 21, 23, 25, 33, 45 and 91 were found to be of sufficient merit to warrant revisions to the final rule. Those comments recommending substantive changes to part 34 were not adopted, since part 34 is restricted to the direct implementation of 40 CFR part 87 which was promulgated by the EPA. The substantive portion of part 34 is intended to be essentially a word-for-word reproduction of the substantive portions of 40 CFR part 87. Future comments regarding the substantive aspects of 40 CFR part 87 should be addressed to the EPA.

Comments pertaining to amending parts 11, 21, 23, 25, 33, 45 and 91:

One commenter noted that the proposed change in § 23.903(a)(1) and a similar change in § 25.903(a)(1) were inconsistent with a previous broad revision for all categories of aircraft which introduced a common requirement with the words "Each engine must have a type certificate." The commenter noted that the wording as stated in the NPRM would exclude engines certificated on the basis of Civil Air Regulation 13 (the predecessor to the present FAR part 33) and all engines

certificated under the provisions of § 21.29. The commenter's proposed wording also addresses another commenter's concern that the requirement for the certification of each engine under part 34 should be restated to emphasize that the requirement is in effect only when part 34 is applicable to that particular engine. The wording proposed by the commenter was adopted for §§ 23.903(a)(1) and 25.903(a)(1) of the final rule.

Regarding the proposed changes to §§ 23.951(d) and 25.951(d), two commenters noted that the requirements of parts 23 and 25 apply to the airplane, not the engines. The proposed change offered by one of the commenters was adopted in the final rule by changing the phrase "Each fuel system for a turbine engine must * * *" to the phrase "Each fuel system for a turbine engine powered airplane must * * *".

One commenter noted that although the NPRM proposed to amend 14 CFR parts 11, 21, 23, 45 and 91 and add a new part 34, there was no corresponding change proposed for part 33 requiring the applicant for a certification under part 21 to show compliance with the applicable requirements of part 34. The FAA concurs with the comment and has added an appropriate revision to part 33 in the final rule.

One commenter noted that the proposed wording in the NPRM for § 45.13(a)(7) and 45.13(a)(7)(i) is inconsistent with the current practice that engines that do not have gaseous or exhaust smoke emission standards imposed by 40 CFR part 87, namely turboprop (Class TP) engines of less than 1000 kW rated power, do not need to indicate any information on emissions on their identification plates. The commenter recommended adding the words "exhaust emissions" to the first sentence in § 45.13(a)(7) as follows: "* * * indicates compliance with the applicable exhaust emissions provisions of part 34 * * *". A similar change was recommended for § 45.13(a)(7)(i). These minor clarifications were adopted by the FAA in the final rule. The same commenter also suggested that the requirements for a "permanent powerplant record" under § 45.13(a)(7)(i) and (ii) be changed to "engine logbook". The suggestion was not adopted in the final rule. The FAA does not have a requirement for an "engine logbook" nor could the FAA determine that "engine logbook" was an industry standard or custom. Therefore, the generic term "permanent powerplant record" was kept in the final rule.

One commenter suggested that as a matter of practical convenience the

proposed requirement for 14 CFR 91.27(d) commence as follows: [14 CFR part 91 will be completely revised as of August 18, 1990 (see 54 FR 34284, August 18, 1990) to renumber all of its sections. Section 91.27 will be renumbered as § 91.203 and § 91.28 will be renumbered as § 91.715. Hereafter in this preamble, references to the renumbered Part 91 will be shown in brackets.] "Except as provided in § 91.28 [91.715], no person * * *, and that § 91.28 [91.715] be amended to reflect the exhaust emission exemption of 40 CFR 87.7, as is currently provided for certificates of airworthiness in § 91.28(a) [91.715(a)]. The recommendation was not adopted in the final rule. Part 87 allows for an exemption for airplanes that do not comply with emission standards when operated on flights of short duration or at infrequent intervals. These exemptions from emission compliance are not as broad as those exemptions allowed for airworthiness under § 91.28 [91.715]. Part 34 does and must reflect the requirements of 40 CFR 87.7.

Comments Pertaining to the New Part 34

Based on the comments received, a definition for "reference day conditions" was added to § 34.1, and § 34.1 definitions for "date of manufacture," "aircraft," and "Administrator" were amended for clarity or to conform with an existing definition of the term in use in the FARs.

Several of the comments pertained to typographical errors in the NPRM and the inclusion of additional terms in the abbreviations table in § 34.2. The commenters' recommended changes were adopted in the final rule.

Regarding the proposed § 34.60(b), a commenter suggested that the requirement to use a dynamometer for engines producing shaft power is unduly restrictive. The commenter stated that acceptance testing of most new turboprop engines is done using a propeller with either a calibrated test-stand torque meter or the engine's integral torque measuring device. The commenter concluded that if these devices are acceptable to the FAA for determining an engine's power output they should be equally acceptable for the part 34 tests. The comment was not adopted in the final rule. The requirement for the dynamometer was established by the EPA in 40 CFR 87.60(b). The FAA may, however, approve alternative test procedures under the provisions of § 34.3(a) or § 34.5 if proper applications are submitted. Part 34 reflects, and must continue to reflect, the requirements of 40 CFR part 87.60(b).

One commenter indicated that the turbine fuel specifications contained in proposed § 34.61 are not consistent with the latest American Society for Testing Materials (ASTM) recommendations. In response, the FAA notes that the EPA initially adopted the turbine fuel specifications identical to those contained in appendix 4 of Volume 2 of ICAO Annex 16. However, after much consideration, the EPA subsequently revised the fuel specifications (47 FR 58462, December 30, 1982). As required, 14 CFR part 34 must directly adopt the revised EPA fuel specification (with the exception of a correction of a typographical error in the units of measure for kinematic viscosity). It should be noted that § 34.61 fuel specifications are more stringent than the fuel specifications in appendix 4 of Volume 2 of ICAO Annex 16.

Section 34.7 states that all petitions for rulemaking involving either the substance of an emission standard or test procedure prescribed by the EPA, or a compliance date for such standard or procedure, must be submitted to the EPA. As stated in the NPRM (53 FR 18530, May 23, 1988), informational copies of such petitions are invited by the FAA. One commenter wrote that to invite rather than require is ambiguous and would set an undesirable precedent. The commenter concluded that if copies of the petition are not required, the provision to invite informational copies of the petition should be removed from the regulation. The commenter's suggestion has not been adopted in the final rule. The FAA feels that the invited information copies will expedite the required consultation process between the FAA and the EPA in order to determine if action on such petitions requires rulemaking under sections 231 and 232 of the Clean Air Act, as amended.

One commenter was concerned that the fuel venting and exhaust emission requirements of part 34 would be applied to auxiliary power unit (APU) installations through the requirements of parts 23 and 25. The EPA proposed to withdraw emission control requirements from APU's in 1978 (43 FR 12615, March 24, 1978) and omitted APU emission control requirements from their final rule (47 FR 58462, December 30, 1982). Therefore, the FAA does not intend to impose part 34 requirements on APUs.

A commenter suggested that where engine power is expressed in kilonewton(s), the equivalent in pounds of thrust should also be shown. The suggestion has merit and was adopted in the final rule.

Several commenters suggested changes in the arrangement of part 34 sections and deletion of certain wording as a means of simplifying part 34 without affecting the content of 40 CFR part 87. The suggestions were not adopted in the final rule. The FAA chose to incorporate, to the maximum extent possible, the substantive portions of 40 CFR part 87 into 14 CFR part 34 on a word-for-word and section-to-section basis in order to maintain consistency between the two bodies of rules.

One commenter requested assurance from the FAA that the new part 34 would not place any new or additional regulatory burden on owners/operators of in-use JT3D engines manufactured before 1978. New part 34 is intended to codify only the provisions of Special Federal Aviation Regulation (SFAR) 27-5, and the EPA standards and test procedures contained in 40 CFR part 87. New part 34 does not place any new or additional regulatory burden on owners/operators of any aircraft or aircraft engines; it merely recodifies the existing rules of SFAR 27 and 40 CFR part 87. This includes in-use JT3D engines manufactured before 1978. There is no requirement in new part 34 to retrofit in-use JT3D engines manufactured before 1978.

Paperwork Reduction Act

Information collection requirements contained in SFAR 27-5 were approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (Pub. L. 96-511) and was assigned OMB control number 2120-0508. That control number will be designated for §§ 34.7 and 45.13, as listed in § 11.101(a).

Regulatory Evaluation

The FAA has reviewed the final rule establishing the new part 34, "Fuel Venting and Exhaust Emission Requirements for Turbine Powered Airplanes," to determine what, if any, economic impact it will have on the aviation industry. The FAA concludes that part 34 will not have a significant economic impact on the aviation industry and that it does not constitute a major rule pursuant to Executive Order 12291.

Section 232 the Clean Air Act Amendments of 1970, Public Law 91-604, requires the FAA to issue regulations that ensure compliance with all aircraft emissions standards promulgated under section 231 of the Clean Air Act, which are currently prescribed in 40 CFR part 87. These standards and their applicability are clearly defined in 40

CFR part 87, and the FAA has no option but to enforce them.

As part of the process of promulgating 40 CFR part 87, the EPA conducted an economic analysis of the proposed regulations and determined that they would not constitute a major rule, as defined by Executive Order 12291 (47 FR 58469, December 30, 1982). This determination was based on the expected economic impact being well below the \$100 million per year threshold set forth in the Executive Order, and the expectation that the rules would not impose significantly increased costs or other adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S. enterprises to compete with those of other countries. The EPA's economic analysis containing this determination can be found in Public Docket Number OMSAPC-78-1, which may be examined at the Environmental Protection Agency, Central Docket Section, West Tower Lobby, Gallery I, 401 M Street SW., Washington, DC 20460. A copy of the EPA's economic analysis has also been placed in Docket 25613 for the convenience of those interested in reviewing it. The FAA has reviewed and concurs with the findings in the EPA economic analysis.

Following the EPA's revision of 40 CFR part 87, the FAA issued amended SFAR 27-5 (48 FR 56735, December 23, 1983), which required compliance with all of the provisions of 40 CFR part 87. The SFAR was most recently amended on September 15, 1989 (54 FR 39288, September 25, 1989). The purpose of part 34 is to replace SFAR 27-5 as a permanent part in the FAR's and to continue the enforcement of 40 CFR part 87, as required by the statute. This action does not in any way change, add to, or take away from the standards in 40 CFR part 87 or the requirements for compliance currently implemented under SFAR 27-5. Part 34 will not impose any new or additional regulatory requirements. On May 23, 1988, the FAA issued a notice of proposed rulemaking indicating its intention to promulgate part 34. This NPRM contained a regulatory evaluation asserting that no new or additional cost burdens would be imposed by the new regulation. No comments were submitted in Docket 25613 disputing this assertion. Therefore, the FAA is assured that no new or additional cost burden will result from the promulgation of this regulation.

Part 34 is easier to review and understand than SFAR 27-5. Thus, persons affected by 40 CFR part 87 will be relieved from a burden and a slight, unquantifiable benefit will result from

this action. Because this beneficial economic impact is considered minimal, the FAA determines that no further analysis is necessary. Accordingly, the FAA concludes that this rulemaking action will not have a significant economic impact on the aviation industry and that it does not constitute a major rule pursuant to Executive Order 12291.

International Trade Impact Analysis

Part 34 will neither eliminate any present regulation nor impose any new regulation. As a result, affected operators will not incur additional costs or significant costs savings. Thus, part 34 will not have any impact on trade opportunities for either U.S. firms doing business overseas or foreign firms doing business in the United States.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 was enacted to ensure that small entities are not unnecessarily or disproportionately burdened by Government regulations. The Act requires a Regulatory Flexibility Analysis if a rule has a significant economic impact, either detrimental or beneficial, on a substantial number of small business entities. As noted above, part 34 will neither eliminate any present regulations nor impose any new regulations and, thus, will not have a significant economic impact, either detrimental or beneficial, on affected operators. Consequently, the FAA determines that, under the criteria of the Regulatory Flexibility Act of 1980, a regulatory flexibility analysis is not required.

Environmental Analysis

Pursuant to Department of Transportation, "Policies and Procedures for Considering Environmental Impacts" (FAA Order 1050.1D, appendix 7, paragraph 4, change 3, December 5, 1986), the FAA is categorically excluded from providing an environmental analysis with regard to part 34 because it is mandated by law to issue regulations to ensure compliance with the EPA aircraft emissions standards and the EPA has performed all required environmental analyses prior to the issuance of those standards.

Federalism Implications

The regulations adopted herein will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance

with Executive Order 12612, it is determined that this final rule will not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Conclusion

The FAA has determined that this document involves regulations which are not considered to be major under the procedures and criteria prescribed in Executive Order 12291. The rule is considered not significant under to Department of Transportation Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). A copy of the evaluation prepared for this action is contained in the regulatory docket. A copy of the evaluation may be obtained from the person identified in the section entitled "FOR FURTHER INFORMATION CONTACT." For the reasons stated in the regulatory evaluation, I certify that these regulations, if promulgated, will not have a significant economic impact on a substantial number of small entities. In addition, these proposals, if adopted, would have little or no impact on trade opportunities for U.S. firms doing business overseas or for foreign firms doing business in the United States.

List of Subjects

14 CFR Parts 11, 21, 23, 25, 33, 43, 45, and 91

Air transportation, Aircraft, Aviation safety.

14 CFR Part 34

Air pollution control, Aircraft, Incorporation by reference.

The Final Rule

Accordingly, the FAA amends 14 CFR, chapter I, by amending parts 11, 21, 23, 25, 33, 43, 45, and 91, and adding a new part 34 as follows:

PART 11—GENERAL RULE-MAKING PROCEDURES

1. The authority citation for part 11 continues to read as follows:

Authority: 49 U.S.C. 1341(a), 1343(d), 1348, 1354(a), 1401 through 1405, 1421 through 1431, 1481, 1502; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

2. By removing SFAR 27-5.

§ 11.101 [Amended]

3. In § 11.101(a), by removing from the chart the reference and control number for SFAR 27; and by inserting into the chart the following references:

§ 34.7 2120-0508.

§ 45.13 2120-0508.

PART 21—CERTIFICATION PROCEDURES FOR PRODUCTS AND PARTS

4. The authority citation for part 21 is revised to read as follows:

Authority: 49 U.S.C. 1344, 1348(c), 1352, 1354(a), 1355, 1421 through 1431, 1502, 1651(b)(2), 42 U.S.C. 7572; E.O. 11514; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

5. By removing SFAR 27-5.

6. In § 21.17, paragraph (a) introductory text is revised to read as follows:

§ 21.17 Designation of applicable regulations.

(a) Except as provided in § 23.2, § 25.2, and in parts 34 and 36 of this chapter, an applicant for a type certificate must show that the aircraft, aircraft engine, or propeller concerned meets—

7. In § 21.21, paragraph (b) introductory text and (b)(1) are revised to read as follows:

§ 21.21 Issue of type certificate: normal, utility, acrobatic, commuter, and transport category aircraft; aircraft engines; propellers.

(b) The applicant submits the type design, test reports, and computations necessary to show that the product to be certificated meets the applicable airworthiness, aircraft noise, fuel venting, and exhaust emission requirements of the Federal Aviation Regulations and any special conditions prescribed by the Administrator, and the Administrator finds—

(1) Upon examination of the type design, and after completing all tests and inspections, that the type design and the product meet the applicable noise, fuel venting, and emissions requirements of the Federal Aviation Regulations, and further finds that they meet the applicable airworthiness requirements of the Federal Aviation Regulations or that any airworthiness provisions not complied with are compensated for by factors that provide an equivalent level of safety; and

8. In § 21.29, paragraph (a)(1)(i) and (b) are revised to read as follows:

§ 21.29 Issue of type certificate: import products.

(a) * * *

(1) * * *

(i) The applicable aircraft noise, fuel venting and exhaust emissions requirements of this subchapter as designated in § 21.17, or the applicable

aircraft noise, fuel venting and exhaust emissions requirements of the country in which the product was manufactured, and any other requirements the Administrator may prescribe to provide noise, fuel venting and exhaust emission levels no greater than those provided by the applicable aircraft noise, fuel venting, and exhaust emission requirements of this subchapter as designated in § 21.17; and

(b) A product type certificated under this section is considered to be type certificated under the noise standards of part 36, and the fuel venting and exhaust emission standards of part 34, of the Federal Aviation Regulations where compliance therewith is certified under paragraph (a)(1)(i) of this section, and under the airworthiness standards of that part of the Federal Aviation Regulations with which compliance is certified under paragraph (a)(1)(ii) of this section or to which an equivalent level of safety is certified under paragraph (a)(1)(ii) of this section.

9. In § 21.31, paragraph (d) is revised to read as follows:

§ 21.31 Type design.

(d) Any other data necessary to allow, by comparison, the determination of the airworthiness, noise characteristics, fuel venting, and exhaust emissions (where applicable) of later products of the same type.

10. In § 21.33, paragraph (b)(1) is revised to read as follows:

§ 21.33 Inspection and tests.

(b) * * *

(1) Compliance with the applicable airworthiness, aircraft noise, fuel venting, and exhaust emission requirements;

11. In § 21.93, paragraph (c) is added to read as follows:

§ 21.93 Classification of changes in type design.

(c) For purposes of complying with part 34 of this chapter, any voluntary change in the type design of the airplane or engine which may increase fuel venting or exhaust emissions is an "emissions change."

12. In § 21.101, paragraph (a) introductory text is revised to read as follows:

§ 21.101 Designation of applicable regulations.

(a) Except as provided in § 23.2 and § 25.2 and parts 34 and 36 of this chapter, an applicant for a change to a

type certificate must comply with either—

13. In § 21.115, paragraph (a) is revised to read as follows:

§ 21.115 Applicable requirements.

(a) Each applicant for a supplemental type certificate must show that the altered product meets applicable airworthiness requirements as specified in paragraphs (a) and (b) of § 21.101 and, in the case of an acoustical change described in § 21.93(b), show compliance with the applicable noise requirements of § 36.7 and § 36.9 of this chapter and, in the case of an emissions change described in § 21.93(c), show compliance with the applicable fuel venting and exhaust emissions requirements of part 34.

14. In § 21.183, paragraph (g) is added to read as follows:

§ 21.183 Issue of standard airworthiness certificates for normal, utility, acrobatic, commuter, and transport category aircraft; manned free balloons; and special classes of aircraft.

(g) *Fuel venting and exhaust emission requirements.* Notwithstanding all other provisions of this section, and irrespective of the date of application, no airworthiness certificate is issued, on and after the dates specified in part 34 for the airplanes specified therein, unless the airplane complies with the applicable requirements of that part.

15. In § 21.187 paragraph (c) is added to read as follows:

§ 21.187 Issue of multiple airworthiness certification.

(c) The aircraft complies with the applicable requirements of part 34.

16. Section 21.257 is revised to read as follows:

§ 21.257 Type certificates: issue.

An applicant is entitled to a type certificate for a product manufactured under a delegation option authorization if the Administrator finds that the product meets the applicable airworthiness, noise, fuel venting, and exhaust emission requirements (including applicable acoustical change or emissions change requirements in the case of changes in type design).

17. In § 21.451, paragraph (d) is revised to read as follows:

§ 21.451 Limits of applicability.

(d) Notwithstanding any other provision of this subpart, a DAS may not issue a supplemental type certificate

involving the exhaust emissions change requirements of part 34 or the acoustical change requirements of part 36 of this chapter until the Administrator finds that those requirements are met.

PART 23—AIRWORTHINESS STANDARDS: NORMAL, UTILITY, ACROBATIC, AND COMMUTER CATEGORY AIRPLANES

18. The authority citation for part 23 continues to read as follows:

Authority: 49 U.S.C. 1344, 1354(a), 1355, 1421, 1423, 1424, 1425, 1428, 1429, 1430; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

19. In § 23.903, paragraph (a)(1) is revised to read as follows:

§ 23.903 Engines.

(a) * * *

(1) Each engine must have a type certificate and must meet the applicable requirements of part 34 of this chapter.

20. In § 23.951, paragraph (d) is added to read as follows:

§ 23.951 General.

(d) Each fuel system for a turbine engine powered airplane must meet the applicable fuel venting requirements of part 34 of this chapter.

PART 25—AIRWORTHINESS STANDARDS: TRANSPORT CATEGORY AIRPLANES

21. The authority citation for part 25 continues to read as follows:

Authority: 49 U.S.C. 1344, 1354(a), 1355, 1421, 1423, 1424, 1425, 1428, 1429, 1430; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

22. In § 25.903, paragraph (a)(1) is revised to read as follows:

§ 25.903 Engines.

(a) * * *

(1) Each engine must have a type certificate and must meet the applicable requirements of part 34 of this chapter.

23. In § 25.951, paragraph (d) is added to read as follows:

§ 25.951 General.

(d) Each fuel system for a turbine engine powered airplane must meet the applicable fuel venting requirements of part 34 of this chapter.

PART 33—AIRWORTHINESS STANDARDS: AIRCRAFT ENGINES

24. The authority citation for part 33 continues to read as follows:

Authority: 49 U.S.C. 1344, 1354(a), 1355, 1421, 1423, 1424, 1425; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 22, 1983).

25. In § 33.1, paragraph (b) is revised to read as follows:

§ 33.1 Applicability.

(b) Each person who applies under part 21 for such a certificate or change must show compliance with the applicable requirements of this part and the applicable requirements of part 34 of this chapter.

PART 43—MAINTENANCE, PREVENTIVE MAINTENANCE, REBUILDING, AND ALTERATION

26. The authority citation for part 43 continues to read as follows:

Authority: 49 U.S.C. 1354, 1421 through 1430; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 22, 1983).

27. By removing SFAR 27-5.

PART 45—IDENTIFICATION AND REGISTRATION MARKETING

28. The authority citation for part 45 continues to read as follows:

Authority: 49 U.S.C. 1348, 1354, 1401, 1402, 1421, 1423, and 1522; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

29. By removing SFAR 27-5.

30. In § 45.13, paragraph (a)(7) is redesignated as paragraph (a)(8) and a new paragraph (a)(7) is added to read as follows:

§ 45.13 Identification data.

(a) * * *

(7) On or after January 1, 1984, for aircraft engines specified in part 34 of this chapter, the date of manufacture as defined in § 34.1 of that part, and a designation, approved by the Administrator of the FAA, that indicates compliance with the applicable exhaust emission provisions of part 34 and 40 CFR part 87. Approved designations include COMPLY, EXEMPT, and NON-US as appropriate.

(i) The designation Comply indicates that the engine is in compliance with all of the applicable exhaust emissions provisions of part 34. For any engine with a rated thrust in excess of 26.7 kilonewtons (6000 pounds) which is not used or intended for use in commercial operations and which is in compliance with the applicable provisions of part 34, but does not comply with the hydrocarbon emissions standard of § 34.21(d), the statement "May not be used as a commercial aircraft engine" must be noted in the permanent powerplant record that accompanies the

engine at the time of manufacture of the engine.

(ii) The designation EXEMPT indicates that the engine has been granted an exemption pursuant to the applicable provision of § 34.7 (a)(1), (a)(4), (b), (c), or (d), and an indication of the type of exemption and the reason for the grant must be noted in the permanent powerplant record that accompanies the engine from the time of manufacture of the engine.

(iii) The designation NON-US indicates that the engine has been granted an exemption pursuant to § 34.7(a)(1), and the notation "This aircraft may not be operated within the United States", or an equivalent notation approved by the Administrator of the FAA, must be inserted in the aircraft logbook, or alternate equivalent document, at the time of installation of the engine.

PART 91—GENERAL OPERATING AND FLIGHT RULES

31. The authority citation for part 91 continues to read as follows:

Authority: 49 U.S.C. 1301(7), 1303, 1344, 1348, 1352 through 1355, 1401, 1421 through 1431, 1471, 1472, 1502, 1510, 1522, and 2121 through 2125; Articles 12, 29, 31, and 32(a) of the Convention on International Civil Aviation (61 Stat. 1180); 42 U.S.C. 4321 et seq.; E.O. 11514; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

When adopted, the following amendment will be reflected in new part 91 effective on August 18, 1990:

32. By removing SFAR 27-5.

33. In § 91.203, paragraph (d) is added to read as follows:

§ 91.203 Civil aircraft: Certifications required.

(d) No person may operate a civil airplane (domestic or foreign) into or out of an airport in the United States unless it complies with the fuel venting and exhaust emissions requirements of part 34 of this chapter.

34. Part 34 is added to read as follows:

PART 34—FUEL VENTING AND EXHAUST EMISSION REQUIREMENTS FOR TURBINE ENGINE POWERED AIRPLANES

Subpart A—General Provisions

Sec.

34.1 Definitions.

34.2 Abbreviations.

34.3 General requirements.

34.4 [Reserved].

34.5 Special test procedures.

34.6 Aircraft safety.

Sec.

34.7 Exemptions.

Subpart B—Engine Fuel Venting Emissions (New and In-Use Aircraft Gas Turbine Engines)

34.10 Applicability.

34.11 Standard for fuel venting emissions.

Subpart C—Exhaust Emissions (New Aircraft Gas Turbine Engines)

34.20 Applicability.

34.21 Standards for exhaust emissions.

Subpart D—Exhaust Emissions (In-Use Aircraft Gas Turbine Engines)

34.30 Applicability.

34.31 Standards for exhaust emissions.

Subpart E—[Reserved]**Subpart F—[Reserved]****Subpart G—Test Procedures for Engine Exhaust Gaseous Emissions (Aircraft and Aircraft Gas Turbine Engines)**

Sec.

34.60 Introduction.

34.61 Turbine fuel specifications.

34.62 Test procedure (propulsion engines).

34.63 [Reserved]

34.64 Sampling and analytical procedures for measuring gaseous exhaust emissions.

34.65 to § 34.70 [Reserved]

34.71 Compliance with gaseous emission standards.

Subpart H—Test Procedures for Engine Smoke Emissions (Aircraft Gas Turbine Engines)

34.80 Introduction.

34.81 Fuel specifications.

34.82 Sampling and analytical procedures for measuring smoke exhaust emissions.

34.83 to § 34.88 [Reserved]

34.89 Compliance with smoke emission standards.

Authority: 42 U.S.C. 1857f-10; 49 U.S.C. 106(g); 49 U.S.C. App. 1348(c), 1354(a), 1421, 1423.

Subpart A—General Provisions**§ 34.1 Definitions.**

As used in this part, all terms not defined herein shall have the meaning given them in the Clean Air Act, as amended (42 U.S.C. 7401 et. seq.):

Act means the Clean Air Act, as amended (42 U.S.C. 7401 et. seq.).

Administrator means the Administrator of the Federal Aviation Administration or any person to whom he has delegated his authority in the matter concerned.

Administrator of the EPA means the Administrator of the Environmental Protection Agency and any other officer or employee of the Environmental Protection Agency to whom the authority involved may be delegated.

Aircraft as used in this part means any airplane as defined in 14 CFR part 1 for which a U.S. standard airworthiness

certificate or equivalent foreign airworthiness certificate is issued.

Aircraft engine means a propulsion engine which is installed in, or which is manufactured for installation in, an aircraft.

Aircraft gas turbine engine means a turboprop, turbofan, or turbojet aircraft engine.

Class TP means all aircraft turboprop engines.

Class TF means all turbofan or turbojet aircraft engines except engines of Class T3, T8, and TSS.

Class T3 means all aircraft gas turbine engines of the JT3D model family.

Class T8 means all aircraft gas turbine engines of the JT8D model family.

Class TSS means all aircraft gas turbine engines employed for propulsion of aircraft designed to operate at supersonic flight speeds.

Commercial aircraft engine means any aircraft engine used or intended for use by an "air carrier" (including those engaged in "intrastate air transportation") or a "commercial operator" (including those engaged in "intrastate air transportation") as these terms are defined in the Federal Aviation Act and the Federal Aviation Regulations.

Commercial aircraft gas turbine engine means a turboprop, turbofan, or turbojet commercial aircraft engine.

Date of manufacture of an engine is the date the inspection acceptance records reflect that the engine is complete and meets the FAA approved type design.

Emission measurement system means all of the equipment necessary to transport the emission sample and measure the level of emissions. This includes the sample system and the instrumentation system.

Engine model means all commercial aircraft turbine engines which are of the same general series, displacement, and design characteristics and are approved under the same type certificate.

Exhaust emissions means substances emitted into the atmosphere from the exhaust discharge nozzle of an aircraft or aircraft engine.

Fuel venting emissions means raw fuel, exclusive of hydrocarbons in the exhaust emissions, discharged from aircraft gas turbine engines during all normal ground and flight operations.

In-use aircraft gas turbine engine means an aircraft gas turbine engine which is in service.

New aircraft turbine engine means an aircraft gas turbine engine which has never been in service.

Power setting means the power or thrust output of an engine in terms of kilonewtons thrust for turbojet and turbofan engines or shaft power in terms of kilowatts for turboprop engines.

Rated output (RO) means the maximum power/thrust available for takeoff at standard day conditions as approved for the engine by the Federal Aviation Administration, including reheat contribution where applicable, but excluding any contribution due to water injection and excluding any emergency power/thrust rating.

Rated pressure ratio (rPR) means the ratio between the combustor inlet pressure and the engine inlet pressure achieved by an engine operation at rated output.

Reference day conditions means the reference ambient conditions to which the gaseous emissions (HC and smoke) are to be corrected. The reference day conditions are as follows:

Temperature=15°C, specify humidity=0.00629 kg H₂O/kg of dry air, and pressure=101325 Pa.

Sample system means the system which provides for the transportation of the gaseous emission sample from the sample probe to the inlet of the instrumentation system.

Shaft power means only the measured shaft power output of a turboprop engine.

Smoke means the matter in exhaust emissions which obscures the transmission of light.

Smoke number (SN) means the dimensionless term quantifying smoke emissions.

Standard day conditions means standard ambient conditions as described in the United States Standard Atmosphere 1976, (i.e., temperature=15°C, specific humidity=0.00 kg H₂O/kg dry air, and pressure=101325 Pa.)

Taxi/idle (in) means those aircraft operations involving taxi and idle between the time of landing roll-out and final shutdown of all propulsion engines.

Taxi/idle (out) means those aircraft operations involving taxi and idle between the time of initial starting of the propulsion engine(s) used for the taxi and the turn onto the duty runway.

§ 34.2 Abbreviations.

The abbreviations used in this part have the following meanings in both upper and lower case:

EPA United States Environmental Protection Agency
FAA Federal Aviation Administration,
United States Department of Transportation
HC Hydrocarbon(s)
HP Horsepower

hr Hour(s)
 H₂O water
 kg Kilogram(s)
 kJ Kilojoule(s)
 LTO Landing and takeoff
 min Minute(s)
 Pa Pascal(s)
 rO Rated output
 rPR Rated pressure ratio
 sec Second(s)
 SP Shaft power
 SN Smoke number
 T Temperature, degrees Kelvin
 TIM Time in mode
 W Watt(s)
 °C Degrees Celsius
 % Percent

§ 34.3 General requirements.

(a) This part provides for the approval or acceptance by the Administrator or the Administrator of the EPA of testing and sampling methods, analytical techniques, and related equipment not identical to those specified in this part. Before either approves or accepts any such alternate, equivalent, or otherwise nonidentical procedures or equipment, the Administrator or the Administrator of the EPA shall consult with the other in determining whether or not the action requires rulemaking under sections 231 and 232 of the Clean Air Act, as amended, consistent with the responsibilities of the Administrator of the EPA and the Secretary of Transportation under sections 231 and 232 of the Clean Air Act.

(b) Under section 232 of the Act, the Secretary of Transportation issues regulations to ensure compliance with 40 CFR part 87. This authority has been delegated to the Administrator of the FAA (49 CFR 1.47).

(c) *U.S. airplanes.* This Federal Aviation Regulation (FAR) applies to civil airplanes that are powered by aircraft gas turbine engines of the classes specified herein and that have U.S. standard airworthiness certificates.

(d) *Foreign airplanes.* Pursuant to the definition of "aircraft" in 40 CFR 87.1(c), this FAR applies to civil airplanes that are powered by aircraft gas turbine engines of the classes specified herein and that have foreign airworthiness certificates that are equivalent to U.S. standard airworthiness certificates. This FAR applies only to those foreign civil airplanes that, if registered in the United States, would be required by applicable Federal Aviation Regulations to have a U.S. standard airworthiness certificate in order to conduct the operations intended for the airplane. Pursuant to 40 CFR 87.3(c), this FAR does not apply where it would be inconsistent with an obligation assumed by the United States

to a foreign country in a treaty, convention, or agreement.

(e) Reference in this regulation to 40 CFR part 87 refers to title 40 of the Code of Federal Regulations, chapter I—Environmental Protection Agency, part 87, Control of Air Pollution from Aircraft and Aircraft Engines (40 CFR part 87).

(f) This part contains regulations to ensure compliance with certain standards contained in 40 CFR part 87. If EPA takes any action, including the issuance of an exemption or issuance of a revised or alternate procedure, test method, or other regulation, the effect of which is to relax or delay the effective date of any provision of 40 CFR part 87 that is made applicable to an aircraft under this FAR, the Administrator of FAA will grant a general administrative waiver of its more stringent requirements until this FAR is amended to reflect the more relaxed requirements prescribed by EPA.

(g) Unless otherwise stated, all terminology and abbreviations in this FAR that are defined in 40 CFR part 87 have the meaning specified in that part, and all terms in 40 CFR part 87 that are not defined in that part but that are used in this FAR have the meaning given them in the Clean Air Act, as amended by Public Law 91-604.

(h) All interpretations of 40 CFR part 87 that are rendered by the EPA also apply to this FAR.

(i) If the EPA, under 40 CFR 87.3(a), approves or accepts any testing and sampling procedures or methods, analytical techniques, or related equipment not identical to those specified in that part, this FAR requires an applicant to show that such alternate, equivalent, or otherwise nonidentical procedures have been complied with, and that such alternate equipment was used to show compliance, unless the applicant elects to comply with those procedures, methods, techniques, and equipment specified in 40 CFR part 87.

(j) If the EPA, under 40 CFR 87.5, prescribes special test procedures for any aircraft or aircraft engine that is not susceptible to satisfactory testing by the procedures in 40 CFR part 87, the applicant must show the Administrator that those special test procedures have been complied with.

(k) Wherever 40 CFR part 87 requires agreement, acceptance, or approval by the Administrator of the EPA, this FAR requires a showing that such agreement or approval has been obtained.

(l) Pursuant to 42 U.S.C. 7573, no state or political subdivision thereof may adopt or attempt to enforce any standard respecting emissions of any air pollutant from any aircraft or engine

thereof unless that standard is identical to a standard made applicable to the aircraft by the terms of this FAR.

(m) If EPA, by regulation or exemption, relaxes a provision of 40 CFR part 87 that is implemented in this FAR, no state or political subdivision thereof may adopt or attempt to enforce the terms of this FAR that are superseded by the relaxed requirement.

(n) If any provision of this FAR is rendered inapplicable to a foreign aircraft as provided in 40 CFR 87.3(c) (international agreements), and § 34.3(d) of this FAR, that provision may not be adopted or enforced against that foreign aircraft by a state or political subdivision thereof.

(o) For exhaust emissions requirements of this FAR that apply beginning February 1, 1974, January 1, 1976, January 1, 1978, January 1, 1984, and August 9, 1985, continued compliance with those requirements is shown for engines for which the type design has been shown to meet those requirements, if the engine is maintained in accordance with applicable maintenance requirements for 14 CFR chapter I. All methods of demonstrating compliance and all model designations previously found acceptable to the Administrator shall be deemed to continue to be an acceptable demonstration of compliance with the specific standards for which they were approved.

(p) Each applicant must allow the Administrator to make, or witness, any test necessary to determine compliance with the applicable provisions of this FAR.

§ 34.4 [Reserved].

§ 34.5 Special test procedures.

The Administrator or the Administrator of the EPA may, upon written application by a manufacturer or operator of aircraft or aircraft engines, approve test procedures for any aircraft or aircraft engine that is not susceptible to satisfactory testing by the procedures set forth herein. Prior to taking action on any such application, the Administrator or the Administrator of the EPA shall consult with the other.

§ 34.6 Aircraft safety.

(a) The provisions of this part will be revised if at any time the Administrator determines that an emission standard cannot be met within the specified time without creating a safety hazard.

(b) Consistent with 40 CFR 87.6, if the FAA Administrator determines that any emission control regulation in this part cannot be safely applied to an aircraft, that provision may not be adopted or

enforced against that aircraft by any state or political subdivision thereof.

§ 34.7 Exemptions.

Notwithstanding part 11 of the Federal Aviation Regulations (14 CFR part 11), all petitions for rulemaking involving either the substance of an emission standard or test procedure prescribed by the EPA that is incorporated in this FAR, or the compliance date for such standard or procedure, must be submitted to the EPA. Information copies of such petitions are invited by the FAA. Petitions for rulemaking or exemption involving provisions of this FAR that do not affect the substance or the compliance date of an emission standard or test procedure that is prescribed by the EPA, and petitions for exemptions under the provisions for which the EPA has specifically granted exemption authority to the Secretary of Transportation are subject to part 11 of the Federal Aviation Regulations (14 CFR part 11). Petitions for rulemaking or exemptions involving these FARs must be submitted to the FAA.

(a) *Exemptions based on flights for short durations at infrequent intervals.* The emission standards of this part do not apply to engines which power aircraft operated in the United States for short durations at infrequent intervals. Such operations are limited to:

(1) Flights of an aircraft for the purpose of export to a foreign country, including any flights essential to demonstrate the integrity of an aircraft prior to a flight to a point outside the United States.

(2) Flights to a base where repairs, alterations or maintenance are to be performed, or to a point of storage, or for the purpose of returning an aircraft to service.

(3) Official visits by representatives of foreign governments.

(4) Other flights the Administrator determines, after consultation with the Administrator of the EPA, to be for short durations at infrequent intervals. A request for such a determination shall be made before the flight takes place.

(b) *Exemptions for very low production engine models.* The emissions standards of this part do not apply to engines of very low production after the date of applicability. For the purpose of this part, "very low production" is limited to a maximum total production for United States civil aviation applications of no more than 200 units covered by the same type certificate after January 1, 1984. Engines manufactured under this provision must be reported to the FAA by serial number on or before the date of manufacture and exemptions granted under this

provision are not transferable to any other engine.

(c) *Exemptions for new engines in other categories.* The emissions standards of this part do not apply to engines for which the Administrator determines, with the concurrence of the Administrator of the EPA, that application of any standard under § 34.21 is not justified, based upon consideration of—

(1) Adverse economic impact on the manufacturer;

(2) Adverse economic impact on the aircraft and airline industries at large;

(3) Equity in administering the standards among all economically competing parties;

(4) Public health and welfare effects; and

(5) Other factors which the Administrator, after consultation with the Administrator of the EPA, may deem relevant to the case in question.

(d) *Time-limited exemptions for in-use engines.* The emissions standards of this part do not apply to aircraft or aircraft engines for time periods which the Administrator determines, with the concurrence of the Administrator of the EPA, that any applicable standard under § 34.11(a), or § 34.31(a), should not be applied based upon consideration of—

(1) Documentation demonstrating that all good faith efforts to achieve compliance with such standard have been made;

(2) Documentation demonstrating that the inability to comply with such standard is due to circumstances beyond the control of the owner or operator of the aircraft; and

(3) A plan in which the owner or operator of the aircraft shows that he will achieve compliance in the shortest time which is feasible.

(e) Applications for exemption from this part shall be submitted in duplicate to the Administrator in accordance with the procedures established by the Administrator in part 11.

(f) The Administrator shall publish in the Federal Register the name of the organization to whom exemptions are granted and the period of such exemptions.

(g) No state or political subdivision thereof may attempt to enforce a standard respecting emissions from an aircraft or engine if such aircraft or engine has been exempted from such standard under this part.

Subpart B—Engine Fuel Venting Emissions (New and In-Use Aircraft Gas Turbine Engines)

§ 34.10 Applicability.

(a) The provisions of this subpart are applicable to all new aircraft gas turbine engines of classes T3, T8, TSS, and TF equal to or greater than 36 kilonewtons (8090 pounds) rated output, manufactured on or after January 1, 1974, and to all in-use aircraft gas turbine engines of classes T3, T8, TSS, and TF equal to or greater than 36 kilonewtons (8090 pounds) rated output manufactured after February 1, 1974.

(b) The provisions of this subpart are also applicable to all new aircraft gas turbine engines of class TF less than 36 kilonewtons (8090 pounds) rated output and class TP manufactured on or after January 1, 1975, and to all in-use aircraft gas turbine engines of class TF less than 36 kilonewtons (8090 pounds) rated output and class TP manufactured after January 1, 1975.

§ 34.11 Standard for fuel venting emissions.

(a) No fuel venting emissions shall be discharged into the atmosphere from any new or in-use aircraft gas turbine engine subject to the subpart. This paragraph is directed at the elimination of intentional discharge to the atmosphere of fuel drained from fuel nozzle manifolds after engines are shut down and does not apply to normal fuel seepage from shaft seals, joints, and fittings.

(b) Conformity with the standard set forth in paragraph (a) of this section shall be determined by inspection of the method designed to eliminate these emissions.

(c) As applied to an airframe or an engine, any manufacturer or operator may show compliance with the fuel venting and emissions requirements of this section that were effective beginning February 1, 1974 or January 1, 1975, by any means that prevents the intentional discharge of fuel from fuel nozzle manifolds after the engines are shut down. Acceptable means of compliance include one of the following:

(1) Incorporation of an FAA-approved system that recirculates the fuel back into the fuel system.

(2) Capping or securing the pressurization and drain valve.

(3) Manually draining the fuel from a holding tank into a container.

Subpart C—Exhaust Emissions (New Aircraft Gas Turbine Engines)**§ 34.20 Applicability.**

The provisions of this subpart are applicable to all aircraft gas turbine engines of the classes specified beginning on the dates specified in § 34.21.

§ 34.21 Standards for exhaust emissions.

(a) Exhaust emissions of smoke from each new aircraft gas turbine engine of class T8 manufactured on or after February 1, 1974, shall not exceed a smoke number (SN) of 30.

(b) Exhaust emissions of smoke from each new aircraft gas turbine engine of class TF and of rated output of 129 kilonewtons (29,000 pounds) thrust or greater, manufactured on or after January 1, 1976, shall not exceed

$SN = 83.6 (rO)^{-0.274}$ (rO is in kilonewtons).

(c) Exhaust emission of smoke from each new aircraft gas turbine engine of class T3 manufactured on or after January 1, 1978, shall not exceed a smoke number (SN) of 25.

(d) Gaseous exhaust emissions from each new commercial aircraft gas turbine engine that is manufactured on or after January 1, 1984, shall not exceed:

(1) Classes, TF, T3, T8 engines with rated output equal to or greater than 26.7 kilonewtons (6000 pounds)

Hydrocarbons: 19.6 grams/kilonewton rO.

(2) Class TSS

Hydrocarbons: $140(0.92)^{0.274}$ grams/kilonewton rO.

(e) Smoke exhaust emissions from each gas turbine engine of the classes specified below shall not exceed:

(1) Class TF of rated output less than 26.7 kilonewtons (6000 pounds) manufactured on or after August 9, 1985

$SN = 83.6 (rO)^{-0.274}$ (rO is in kilonewtons) not to exceed a maximum of SN=50.

(2) Classes T3, T8, TSS, and TF of rated output equal to or greater than 26.7 kilonewtons (6000 pounds) manufactured on or after January 1, 1984

$SN = 83.6 (rO)^{-0.274}$ (rO is in kilonewtons) not to exceed a maximum of SN=50.

(3) Class TP of rated output equal to or greater than 1,000 kilowatts (1340 HP) manufactured on or after January 1, 1984

$SN = 187 (rO)^{-0.168}$ (rO is in kilowatts).

(f) The standards set forth in paragraphs (a), (b), (c), (d), and (e) of this section refer to a composite gaseous emission sample representing the operating cycles set forth in the applicable sections of subpart G of this part, and exhaust smoke emissions

emitted during operations of the engine as specified in the applicable sections of subpart H of this part, measured and calculated in accordance with the procedures set forth in those subparts.

Subpart D—Exhaust Emissions (In-use Aircraft Gas Turbine Engines)**§ 34.30 Applicability.**

The provisions of this subpart are applicable to all in-use aircraft gas turbine engines certificated for operation within the United States of the classes specified, beginning on the dates specified in § 34.31.

§ 34.31 Standards for exhaust emissions.

(a) Exhaust emissions of smoke from each in-use aircraft gas turbine engine of Class T8, beginning February 1, 1974, shall not exceed a smoke number (SN) of 30.

(b) Exhaust emissions of smoke from each in-use aircraft gas turbine engine of Class TF and of rated output of 129 kilonewtons (29,000 pounds) thrust or greater, beginning January 1, 1976, shall not exceed

$SN = 83.6 (rO)^{-0.274}$ (rO is in kilonewtons).

(c) The standards set forth in paragraphs (a) and (b) of this section refer to exhaust smoke emissions emitted during operations of the engine as specified in the applicable section of subpart H of this part, and measured and calculated in accordance with the procedure set forth in this subpart.

Subpart E—[Reserved]**Subpart F—[Reserved]****Subpart G—Test Procedures for Engine Exhaust Gaseous Emissions (Aircraft and Aircraft Gas Turbine Engines)****§ 34.60 Introduction.**

(a) Except as provided under § 34.5, the procedures described in this subpart shall constitute the test program used to determine the conformity of new aircraft gas turbine engines with the applicable standards set forth in this part.

(b) The test consists of operating the engine at prescribed power settings on an engine dynamometer (for engines producing primarily shaft power) or thrust measuring test stand (for engines producing primarily thrust). The exhaust gases generated during engine operation must be sampled continuously for specific component analysis through the analytical train.

(c) The exhaust emission test is designed to measure hydrocarbons, carbon monoxide and carbon dioxide concentrations, and to determine mass

emissions through calculations during a simulated aircraft landing-takeoff (LTO) cycle. The LTO cycle is based on time in mode data during high activity periods at major airports. The test for non-TSS class propulsion engines consists of at least the following four modes of engine operations: taxi/idle, takeoff, climbout, and approach. The TSS class propulsion engine test requires an additional mode for descent. The mass emission for the modes are combined to yield the reported values.

(d) When an engine is tested for exhaust emissions on an engine dynamometer or test stand, the complete engine (with all accessories which might reasonably be expected to influence emissions to the atmosphere installed and functioning), shall be used if not otherwise prohibited by § 34.62(a)(2). Use of service air bleed and shaft power extraction to power auxiliary, gearbox-mounted components required to drive aircraft systems is not permitted.

(e) Other gaseous emissions measurement systems may be used if shown to yield equivalent results and if approved in advance by the Administrator or the Administrator of the EPA.

§ 34.61 Turbine fuel specifications.

For exhaust emission testing, fuel meeting the specifications listed below shall be used. Additives used for the purpose of smoke suppression (such as organometallic compounds) shall not be present.

SPECIFICATION FOR FUEL TO BE USED IN AIRCRAFT TURBINE ENGINE EMISSION TESTING

Property values	Allowable range of
Specific Gravity at 15°C.....	0.78-0.82.
Distillation Temperature, °C.....	
10% Boiling Point.....	160-201.
Final Boiling Point.....	240-285.
Net Heat of Combustion, kJ/Kg.....	42,860-43,500.
Aromatics, Volume %.....	15-20.
Naphthalenes, Volume %.....	1.0-3.0.
Smoke Point, mm.....	20-28.
Hydrogen, Mass %.....	13.4-14.0.
Sulphur, Mass %.....	less than 0.3%.
Kinematic Viscosity at 20°C, mm ² /sec.....	4.0-6.5.

§ 34.62 Test procedure (propulsion engines).

(a)(1) The engine shall be tested in each of the following engine operating modes which simulate aircraft operation to determine its mass emission rates. The actual power setting, when corrected to standard day conditions, should correspond to the following

percentages of rated output. Analytical correction for variations from reference day conditions and minor variations in actual power setting should be specified and/or approved by the Administrator:

Mode	Class		
	TP	TF, T3, T8	TSS
Taxi/Idle.....	(*)	(*)	(*)
Takeoff.....	100	100	100
Climbout.....	90	85	65
Descent.....	NA	NA	15
Approach.....	30	30	34

* See paragraph (a) of this section.

(2) The taxi/idle operating modes shall be carried out at a power setting of 7 percent rated thrust unless the Administrator determines that the unique characteristics of an engine model undergoing certification testing at 7 percent would result in substantially different HC emissions than if the engine model were tested at the manufacturers, recommended idle power setting. In such cases the Administrator shall specify an alternative test condition.

(3) The times in mode (TIM) shall be as specified below:

Mode	TP	TF, T3, or T8	TSS
Taxi/Idle.....	26.0 Min.	26.0 Min.	26.0 Min.
Takeoff.....	0.5	0.7	1.2
Climbout.....	2.5	2.2	2.0
Descent.....	N/A	N/A	1.2
Approach.....	4.5	4.0	2.3

(b) Emissions testing shall be conducted on warmed-up engines which have achieved a steady operating temperature.

§ 34.63 [Reserved]

§ 34.64 Sampling and analytical procedures for measuring gaseous exhaust emissions.

The system and procedures for sampling and measurement of gaseous emissions shall be done in accordance with appendices 3 and 5 to ICAO Annex 16, Volume II—Aircraft Engine Emissions, First Edition, June 1981. This incorporation by reference was approved by the Director of the Federal

Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. This document can be obtained from the International Civil Aviation, P.O. Box 400, Succursale: Place de L'Aviation Internationale, 1000 Sherbrooke Street West, Montreal, Quebec, Canada H3H 2R2. Copies may be inspected at the FAA Office of the Chief Counsel, Rules Docket, room 916, Federal Aviation Administration Headquarters Building, 800 Independence Avenue SW., Washington, DC, or at the FAA New England Regional Office, 12 New England Executive Park, Burlington, Massachusetts, or at the Office of the Federal Register, 1100 L Street NW., room 8401, Washington, DC.

§ 34.65–34.70 [Reserved]

§ 34.71 Compliance with gaseous emission standards.

Compliance with each gaseous emission standard by an aircraft engine shall be determined by comparing the pollutant level in grams/kilowatt/cycle or thrust/cycle or grams/kilowatt/cycle as calculated pursuant to § 34.64 with the applicable emission standard under this part.

Subpart H—Test Procedures for Engine Smoke Emissions (Aircraft Gas Turbine Engines)

§ 34.80 Introduction.

Except as provided under § 34.5, the procedures described in this subpart shall constitute the test program to be used to determine the conformity of new and in-use gas turbine engines with the applicable standards set forth in this part. The test is essentially the same as that described in §§ 34.60–34.62, except that the test is designed to determine the smoke emission level at various operating points representative of engine usage in aircraft. Other smoke measurement systems may be used if shown to yield equivalent results and if approved in advance by the Administrator or the Administrator of the EPA.

§ 34.81 Fuel specifications.

Fuel having specifications as provided in § 34.61 shall be used in smoke emission testing.

§ 34.82 Sampling and analytical procedures for measuring smoke exhaust emissions.

The system and procedures for sampling and measurement of smoke emissions shall be done in accordance with appendix 2 to ICAO Annex 16, Volume II—Aircraft Engine Emissions, First Edition, June 1981. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. This document can be obtained from the International Civil Aviation, P.O. Box 400, Succursale: Place de L'Aviation Internationale, 1000 Sherbrooke Street West, Montreal, Quebec, Canada H3H 2R2. Copies may be inspected at the FAA Office of the Chief Counsel, Rules Docket, room 916, Federal Aviation Administration Headquarters Building, 800 Independence Avenue, SW., Washington, DC, or at the FAA New England Regional Office, 12 New England Executive Park, Burlington, Massachusetts, or at the Office of the Federal Register, 1100 L Street, NW., room 8401, Washington, DC.

§ 34.83–§ 34.88 [Reserved]

§ 34.89 Compliance with smoke emission standards.

Compliance with each smoke emission standard shall be determined by comparing the plot of the smoke number as a function of power setting with the applicable emission standard under this part. The smoke number at every power setting must be such that there is a high degree of confidence that the standard will not be exceeded by any engine of the model being tested. An acceptable alternative to testing every engine is described in appendix 6 to ICAO Annex 16, Volume II—Aircraft Engine Emissions, First Edition, June 1981. Other methods of demonstrating compliance may be approved by the Administrator with the concurrence of the Administrator of the EPA.

Issued in Washington, DC, on July 26, 1990.

James B. Busey,

Administrator.

[FR Doc. 90-18788 Filed 8-9-90; 8:45 am]

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Federal Register

Friday
August 10, 1990

Part VI

Department of Labor

Employment and Training Administration

Dictionary of Occupational Titles, Issue
Paper and Initiative; Notice

DEPARTMENT OF LABOR**Employment and Training Administration****Dictionary of Occupational Titles, Issue Paper and Initiative**

AGENCY: Employment and Training Administration, Labor.

ACTION: Notice; request for comments.

SUMMARY: The Secretary of Labor announced a Workforce Quality Agenda to assure that the American workforce has the skills to meet the challenges of the 1990's and beyond. Her Agenda includes a review of the Employment and Training Administration's *Dictionary of Occupational Titles* (DOT) and the system that produces it. The intent of the review is to assure that the DOT responds to the diverse needs of the occupational information user community, with particular attention to the needs of employers, the education community, and the training community, both public and private. This review will include: (1) Obtaining information through a user survey; (2) a review of current and relevant research in the field of occupational information collection and publication; and (3) convening an advisory panel to analyze the information gathered through the review and make recommendations on future revisions to information collection methods used, the type of information collected and the methodology used to publish and disseminate the DOT information.

DATES: Written comments on this notice are invited. Comments shall be received by October 9, 1990.

ADDRESSES: Comments shall be mailed to Robert A. Schaerfl, Director, U.S. Employment Service, Employment and Training Administration, U.S. Department of Labor, 200 Constitution Avenue NW., room N-4470, Washington, DC 20210.

FOR FURTHER INFORMATION CONTACT: Robert A. Schaerfl, Director, U.S. Employment Service, Employment and Training Administration, Telephone: (202) 535-0157 (this is not a toll free number).

SUPPLEMENTARY INFORMATION:**Introduction**

As part of the Secretary of Labor's agenda for improving the quality of the workforce, the Employment and Training Administration (ETA) is reviewing the *Directory of Occupational Titles* (DOT) and the system which produces it. ETA seeks to assure that the DOT is responsive to the needs of the user community. The end product of

the review will provide accurate and current information presented in a useful, meaningful format, that may or may not resemble the present DOT.

This effort is part of the Secretary's plan to improve the nation's ability to provide workers with the skills industry needs. The Secretary recognizes that this nation faces a workforce crisis. Workers are entering the labor market without the skills that employers need. And, many workers already employed have skills that may soon be outdated.

To improve the labor market, the Secretary is implementing a Workforce Quality Agenda. The thrust of the agenda is twofold. First, it will identify skills that are needed in the labor market and establish workplace competency guidelines and occupational skill standards. Then, it will work toward assuring that both new entrants and existing workers have those skills and have ways to continue updating them while on the job. It also calls for improving labor market efficiency by improving the tools used to identify workplace skills and place workers in jobs. The DOT has been identified as a tool which could be effective in the Workforce Quality Agenda.

Today, the DOT has many uses and users within and outside the Department of Labor. However, the DOT was not designed for multiple uses. Further, the DOT may be outdated. The last DOT was published 13 years ago. Extensive changes have occurred in the labor market and in information technology.

To assure that the DOT will be effective in the Workforce Quality Agenda, ETA will convene an advisory panel, conduct a user survey, and explore new methods for collecting, analyzing, organizing, publishing and disseminating occupational information. The advisory panel and user survey are steps that ETA is taking to assure that the user community will assist in designing ETA's occupational information system.

The DOT Defined

First published in 1939, the DOT defines and classifies occupations and characteristics of workers. It is a comprehensive tool that describes the worker traits, methods, work requirements and activities required to perform occupations in the labor market. The concept of "occupations" in the DOT means a collective description of individual jobs performed with minor variations in many places of work. A single worker in a job does not necessarily perform all of the activities contained in a DOT definition. The current edition of the DOT contains 12,860 occupations listed by job titles

most frequently used by employers. The term "DOT" as used in this paper refers collectively to include: the *Dictionary of Occupational Titles* (4th ed. 1977), the 1986 Supplement to the *Dictionary of Occupational Titles*, the *Selected Characteristics of Occupations Defined in the Dictionary of Occupational Titles*, the *Dictionary of Occupational Titles Data Tape*, and the *Guide for Occupational Exploration*.

Background and History of DOT

The first DOT was published in 1939. Its purpose and that of all subsequent editions was to furnish public employment service offices with occupational information and techniques for proper classification and placement of workers. Subsequent editions have been published in 1949, 1965, and 1977 as well as a number of supplements.

The DOT has always been an integral part of the labor market. With each edition, ETA attempts to reflect the needs of the Employment Service, and where possible, needs of users outside the Employment Service Agencies.

The DOT was developed out of a need to have a system for describing and classifying workers for job placement in a labor market where workers were plentiful and jobs scarce. When the labor market changed during World War II to a scarcity of workers, a supplement to the DOT was published. The supplement described worker traits for specific jobs and was used to place inexperienced workers. With the third edition of the DOT the idea that both job descriptions and worker traits were important to the DOT was firmly established. The third edition contained sweeping changes, including material for users outside the Employment Service.

The fourth edition further expanded the idea of using the DOT for purposes other than strictly matching a job with a worker.

Uses and Users of the DOT

During the 1970's the National Academy of Sciences (NAS) conducted a DOT user survey for ETA in connection with a review of the DOT. The NAS reported users in the State Employment Agencies, educational institutions, government agencies, private for-profit companies, and nonprofit agencies. These organizations used the DOT for a variety of purposes such as: Career and vocational counseling, library references, rehabilitation counseling, personnel management, and employment placement. At that time, 88% of the users reported that discontinuing the DOT

would disrupt their work, and about a third (36%) reported that the disruption would be serious.

As part of the review, ETA intends to determine current use and users of the DOT and any future uses. Examples of known current DOT users are:

- Employment Service: Placing workers in jobs, certifying alien workers for jobs in the U.S., counseling job seekers, and developing tests for specific occupations.
- Job Training Partnership Act Programs: Placing program participants in jobs and conducting career counseling.
- Social Security Administration: Determining eligibility for disability benefits.
- Bureau of Apprenticeship and Training: Certifying appropriateness of training programs, and determining length of training time for training programs.
- Veterans Affairs and Various Vocational Rehabilitation Agencies: Conducting career counseling.
- Department of Defense: Assisting in placing military personnel separating from the military service into civilian employment.
- State and National Occupational Information Coordinating Committees: Developing and maintaining the Career Information Delivery Systems (CIDS).
- Business: Writing specific company job descriptions and classifying work performed in an organization.
- Education: Developing curriculum in schools, colleges, and in vocational training programs and in career counseling.
- Bureau of Labor Statistics: Tracking and reporting employment statistics, and occupational information.
- Private Employers: Developing job descriptions and job and pay comparability.
- Economists, Sociologists, Psychologists, Human Resource Personnel and Others in Research: Conducting research and studies in such areas as: literacy, testing, occupational mobility, occupational requirements and qualifications, training and employment, measure of job satisfaction, special education, occupational taxonomies.

DOT Initiative

ETA's goal for the DOT initiative is to provide a DOT that meets the needs of users in a rapidly changing labor market.

To accomplish this goal, ETA will review the current DOT and the system that produces it. The review will consist of a user survey and review of current and relevant research on developing, publishing and disseminating

occupational information such as the DOT. To assure that the DOT meets users needs, ETA will convene an advisory panel to provide user perspectives.

The objective of the review are:

- To re-evaluate the purpose and focus of the DOT;
- To evaluate the scope of coverage and level of detail to meet user needs;
- To assess methodologies of occupational analysis (the methodology used to analyze and study jobs) used in the DOT system to identify, classify, define, and describe jobs in the light of suggested alternatives; and
- To examine new approaches to the production, publication, and dissemination of DOT information, such as electronic media.

The advisory panel will be selected from representatives of the nation's diverse population to represent DOT user points of view from government, vocational training, education, academic communities and the private sector including employers and labor. It will provide advice to ETA and recommend options in light of user needs for the development, publication and dissemination of the DOT.

The user survey will be carried out to determine the relative importance to users and potential users of currency of information, scope of coverage, level of detail and method of dissemination.

ETA expects that the DOT will continue to identify what occurs in an occupation and what skills and worker traits are needed to succeed in the labor market. However, in keeping with the Workforce Quality Agenda, ETA through the DOT, is expanding its view of occupational information to consider new approaches. For example, ETA may explore such ideas as coordinating the DOT effort with other components of the Workforce Quality Agenda, or the notion of coordinating occupational information, workplace competency guidelines, and occupational skill standards and curriculum development through the DOT system.

The DOT and Labor Market Characteristics

The labor market is rapidly changing. The task of keeping the occupational information accurate and current is predicated on developing a system which can identify, react to, and report changes timely. The labor market from now until 2000 will have certain characteristics which may influence the kind and amount of occupational information important to improving the quality of the workforce.

A gap is reported between what basic skills business needs and the

qualifications of the entry level workers available to business. This imbalance between the educational preparation of those entering the labor force and industry's requirements raises an important concern about the ability of the labor market to be productive. Educators and business need better information in order to identify accurately what is needed to satisfy business requirements for productive workers.

Managerial, professional, and technical occupations which require the most education will have faster rates of growth than occupations with the lowest educational requirements, some of which are even projected to decline. More than half of all new jobs created between 1984-2000 will require some education beyond high school, and almost a third will be filled by college graduates. At the same time, occupations with the fastest growth do not necessarily provide the most new jobs.

From now until the year 2000 employment growth and labor force growth will be slower than during the past 12 years. The growth will slow primarily because of the declining number of people in the 16 to 24-year-old age group. There is already a shortage of entry level workers particularly in geographic areas that currently have low unemployment rates. This decline in entry level workers is linked to a decline in the number of workers age 16-to-24 entering the labor force. Competition among employers for these workers is expected to have an impact on colleges and universities, the military, and industries that recruit young entry level workers.

The service-producing sector will account for most of the job growth between now and the year 2000: health services will account for 18 percent, business services industries will account for 16 percent, and retail trade will account for 22 percent. The retail trade division will increase by more than 3.7 million jobs.

Women, persons with disabilities, and minorities (Blacks, Hispanics, Asians, and other groups) are all projected to increase their share of the labor force between now and the year 2000 primarily because the population of other groups is not growing at the rate of minority groups. Employers, faced predominately with entry workers lacking basic job entry requirements may be forced to change their requirements. Employers may need to provide more and different kinds of training on the job than they do now.

Because of the decline in many industries, workers are faced with seeking employment in a labor market for which their specific skills may be outmoded. Workers will, therefore, be forced to seek employment in new or related occupations.

Key Dot Issues

There are five key issues which will provide a framework for determining how ETA will approach occupational information.

1. What occupational information is needed by education, business, private sector, government and the academic community?

2. Should ETA attempt to publish information about all occupations in the economy? If not, what should be the basis for selecting occupations?

3. What would be the most useful way of organizing or classifying information?

4. How, what kind and how much information on occupations should be collected?

5. How should the information be published and disseminated?

A discussion of the issues is provided here to stimulate public comment. The summary and questions are not exhaustive.

1. *What occupational information is needed by education, business, private sector government and the academic community?*

The current DOT provides such information as what and how an occupation is performed; what tools or materials are used; the physical environment of the occupation; the relationship of the work to data, people, and things in the occupation; the worker skills needed such as level of education (formal and informal), level of job training, aptitude, interests, temperaments and physical skills. The DOT provides information for occupational exploration.

a. What occupational information should be collected to address the needs of users?

b. Is there information that should be added that will address non-users and encourage user expansion?

c. How can ETA be more responsive to the needs of those engaged in improving the quality of the workforce?

d. Does the format or presentation of the current DOT discourage use? If yes, how should occupational information be presented?

2. *Should ETA attempt to publish information on all jobs in the economy? If not, what should be the basis for selecting occupations?*

The DOT presently attempts to contain information on all jobs in the

economy which are then grouped to form occupations.

Some observers suggest that occupations be included in the DOT based on a "core" or "master" list of occupations based on some criteria such as labor market characteristics. For example a "core" or "master" list might be developed based on the employment level and growth rate in an occupation. Using the labor characteristics discussed in this paper, this might mean a DOT concentrating on occupations in the managerial, professional, and technical areas in service occupations. Some observers would limit occupations to the "core" or "master" list; others would emphasize the occupations in the "core" or "master" list, and as funding and time permit, include other occupations.

Some observers suggest that the methodology for grouping jobs into occupations affects the number of occupations in the DOT and the amount of information collected. Changing the method of grouping jobs might help in reducing the number of occupations in the DOT and may also improve the usefulness of the information.

a. Should ETA attempt to cover all occupations? If not, what should be the basis for selecting occupations?

b. Is a "core" or "master" list a good idea? If yes, how should the "core" or "master" list be developed?

c. Would changing the way jobs are grouped into occupations be helpful in reducing the number of occupations for study?

d. Should labor market characteristics impact on how, how much and what information is collected and contained in the DOT?

3. *What would be the most useful way of organizing or classifying information?*

DOT information is presented through a coding system, definition, and supplementary information. The information is organized according to work products or what work is done in occupations. For example, occupations that are professional, technical and managerial are grouped together; clerical and sales occupations are together; machine trades occupations are together; and processing occupations are together.

Some observers of the DOT suggest that organizing occupations based on the work or product does not address the needs in placing inexperienced workers or workers seeking employment in a new occupation.

Other observers suggest that skills should be used as the basis for classifying job seekers. For example occupations would be based on the

skills used and/or a combination of skills.

a. How should occupations be classified?

b. Would it be useful and cost efficient to change the classification system? Or, would making the DOT a giant interactive database (something like a giant file cabinet) with the ability to draw out/search for information in a variety of ways make the classification question moot?

4. *How, what kind and how much information on occupations should be collected?*

Currently, there is a great deal of detail gathered for defining an occupation and worker characteristics. The collection process is the same for all jobs and all occupations. The technique used to collect that information is referred to as an observation interview. The observation interview means collecting information about jobs by observing the job and the worker at the place of work and interviewing the worker, supervisors and other personnel. Based on the information collected jobs are grouped into occupations. This technique requires a considerable amount of skilled staff time and corresponding funding.

The current methodology is oriented to collecting information about occupations that produce a product or have an industrial or manufacturing base. But the occupations that are growing are knowledge based occupations such as managerial, professional and technical occupations. In addition, the current job collection technique and analysis methodology may not be suited to detect the impact of telecommunications and computers in jobs. Or, the methods may not be suited to detect the impact of new approaches to performing jobs in groups or teams.

Some observers suggest that the observation interview might be used as the basis for collection for first time information and some other method be used to periodically update or verify occupations.

Other observers suggest that less information be collected; that the level of detail is too great; that the worker traits information be eliminated because it is too time consuming to collect and there is some question about the adequacy and validity of the information collected.

The NAS survey mentioned above found that "many of the DOT variables, especially the aptitudes, interests, and temperaments are not heavily used."

Yet, several known users rely heavily on worker characteristics to make various serious decisions. For example,

the Social Security Administration and vocational rehabilitation organizations use the DOT to make disability decisions and/or service levels.

a. Should the DOT continue to collect information both about the job as well as the worker?

b. Is the current DOT worker traits/characteristics information useful? Would there be consequences if certain or all worker characteristics were not available?

c. Should every occupation be studied in the same way? Or, should some occupations be studied in more detail than others? For example, should occupations that are more complex be studied in more detail than less skilled occupations, such as managerial, professional and technical occupations?

d. What information collection techniques or analysis methodologies new to the DOT system might be used to keep the occupational information accurate and current?

5. *How should the DOT be published and disseminated?*

The DOT is available now in hard copy as well as on a magnetic computer tape. There has been criticism about the hard copy: too large, too cumbersome to use, too fragile.

ETA is considering changes for the hard copy such as:

- making the DOT available in loose leaf method;
- publishing occupational information in volumes by category, for example,

publishing by occupational grouping, industry, skills, or physical demands;

- using tabs to facilitate locating specific information.

ETA has received a number of requests to increase the options of automated distribution. This could involve some or all of the following:

- Floppy diskettes,
- CD ROM (Compact Disk Read Only Memory),

• On-line Information Service/interactive data base,

- Bulletin Board,
- Interactive laser disk.

ETA will explore making occupational information available through an interactive data base which would offer extensive search capability, enabling combinations of data elements, possible only through computer technology.

Some observers suggest that an interactive data base may reduce or eliminate concerns about classifying and formatting the presentation of occupational information. For example, an interactive data base would enable sorting occupational data elements, or descriptive information such as: title, skill, code, worker traits, physical demands and various combinations of the data elements. For example, one could search for all occupations with light physical demands, interest in art, and high school education requirements.

Another consideration is the presentation of the information. The arrangement of the current DOT is by

numerical coding and dictionary format using very stylized and precise language. Some format and presentation considerations, such as how to handle coding, may not be issues when using certain electronic media. For example, in an interactive data base information may be retrieved without sorting through codes. The code is available but does not stand in the way of obtaining other information.

a. What are the needs of users regarding publishing and disseminating occupational information?

b. How should occupational information be presented? Is the format used in the current DOT satisfactory?

c. How should occupational information be published and disseminated in hard copy?

d. How should occupational information be published and disseminated through electronic media?

Request For Public Comment

The Department of Labor is seeking public comment. Interested parties are requested to submit comments, recommendations and/or suggestions for providing occupational information.

Signed at Washington, DC, this third day of August, 1990.

Roberts T. Jones,

Assistant Secretary for Employment and Training.

[FR Doc. 90-18841 Filed 8-9-90; 8:45 am]

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Federal Register

Friday
August 10, 1990

Part VII

Department of Energy

48 CFR Part 915 et al.

**Acquisition Regulation Concerning Profit
Making and Fee Bearing Management
and Operating Contractors; Notice of
Revised Proposed Rulemaking and Public
Hearing**

DEPARTMENT OF ENERGY

48 CFR Parts 915, 950 and 970

Acquisition Regulation Concerning Profit Making and Fee Bearing Management and Operating Contractors

AGENCY: Department of Energy.

ACTION: Notice of revised proposed rulemaking and public hearing.

SUMMARY: The Department of Energy (DOE) today gives notice of a Revised Proposed Rule (RPR) to amend the Department of Energy Acquisition Regulation (DEAR) regarding its contracting practices and fee arrangement with its profit making and fee bearing (hereinafter referred to as "profit making") management and operating (M&O) contractors. The proposed changes are intended to clarify the responsibilities of the parties and provide additional incentives directed toward improved accountability of M&O contractors. Today's RPR combines two earlier proposed rulemakings discussed below.

On January 26, 1990 (55 FR 2796), DOE issued a Notice of Proposed Rulemaking (the "Accountability NOPR") designed to provide its profit making M&O contractors with additional incentives toward improved accountability for activities and management which are clearly the responsibility of the M&O contractors. The Accountability NOPR stated DOE's intent to limit its historical practice of indemnifying its profit making M&O contractors against all risks and costs, particularly when those costs could have been avoided by prudent action by the contractor. In return for provisions which could place greater economic risks upon these contractors, DOE recognized the need to reconsider its overall contractual relationship, including the appropriate balance between risks to be assumed and potential rewards and benefits to be achieved.

On May 24, 1990 (55 FR 24104), DOE issued a Notice of Proposed Rulemaking (the "Award Fee NOPR") which would restructure the system under which fees are made available to its profit making M&O contractors. An important purpose of the Award Fee NOPR was to provide DOE with another management tool to promote performance above expected and generally acceptable levels by establishing a fee arrangement which provides strong financial incentives for contractors to perform at levels which are more than merely satisfactory. The proposed new fee schedules reflected

the economic impacts of inflation since 1983.

Since the Accountability NOPR, which placed greater risks upon DOE's profit making M&O contractors, and the Award Fee NOPR, which offered greater potential rewards for acceptance of those risks and improved performance, are interrelated, today's RPR combines both NOPRs into a single proposed rule.

DATES: Written comments must be received by October 9, 1990.

The public hearing is scheduled to be held in Washington, DC, on August 28, 1990. Requests to speak at the public hearing must be received no later than August 17, 1990.

ADDRESSES: All written comments (10 copies) and requests to speak should be addressed to: Stephen D. Mournighan, Office of Policy, MA-402, Procurement and Assistance Management, Washington, DC 20585, (202) 586-8182.

The public hearing will begin at 9:30 a.m. on August 28, 1990 at U.S. Department of Energy, 1000 Independence Avenue, SW, Room 1E-245, Washington, DC 20585.

For more information concerning public participation in this rulemaking proceeding, see sections V and VI of the "Supplementary Information" portion of this notice.

FOR FURTHER INFORMATION CONTACT:

Stephen D. Mournighan, Office of Policy, MA-402, U.S. Department of Energy, 1000 Independence Avenue, SW, Washington, DC 20585, (202) 586-8182
Lawrence R. Oliver, Assistant General Counsel, for Procurement and Finance (GC-34), 1000 Independence Avenue, SW., Washington, DC 20585, (202) 586-2440.

SUPPLEMENTARY INFORMATION:

- I. Background
- II. Analysis of Public Comments
- III. Section-by-Section Analysis of the Revised Proposed Rule
- IV. Procedural Requirements
 - A. Review Under Executive Order 12291
 - B. Review Under the Regulatory Flexibility Act
 - C. Review Under the Paperwork Reduction Act
 - D. Review Under the National Environmental Policy Act
 - E. Review Under Executive Order 12612
- V. Public Comments
- VI. Public Hearing

I. Background

The Department of Energy and its predecessor agencies have engaged management and operating contractors beginning with the Manhattan Project, which was conceived during World War II to build the nation's first atomic bomb. M&O contractors continue to participate in carrying out DOE's

research and development (R&D) and weapons production missions.

DOE's objective in issuing today's RPR is to assure that its M&O contractors have every incentive to perform in an excellent manner in every aspect of their service, and with particular emphasis placed in environment, health and safety aspects of their work. Accordingly, DOE has examined its full indemnification and award fee policies and today proposes to make revised prospective modifications. These proposed changes would apply only to those M&O contractors which are profit making under their contracts with DOE. In order to promote excellence in performance by these contractors, DOE is proposing to modify the current provisions of the DEAR relating to allowances for costs and expenses incurred and to the structure and amount of award fees available under prospective contracts with its profit making M&O contractors.

The period for public comments for the Accountability NOPR closed on March 27, 1990. Forty-six comments were received, including comments from current M&O contractors and subcontractors, Members of Congress, associations, one other Federal agency and one state. The period for public comments on the Award Fee NOPR closed on July 9, 1990. Fifteen comments were received. These comments were from current M&O contractors and subcontractors, associations and a Member of Congress.

This RPR recognizes the interrelationship of higher risks placed upon contractors by the Accountability NOPR with the greater potential rewards available under the Award Fee NOPR. Therefore, both earlier proposals are combined into a single revised proposal, which reflects DOE's response to comments received from the public and additional internal DOE review and analysis.

1. A Summary of The Accountability NOPR (January 26, 1990)

The Accountability NOPR specified conditions under which the profit making M&O contractors assume the risk for certain avoidable costs. The proposed non-reimbursable avoidable costs included:

- Costs and expenses resulting from damage to government property as a direct result of contractor or subcontractor ordinary negligence where the costs which are to be borne by the contractor are those in effecting repairs to, or replacement of, Government property and where DOE

did not contribute to the negligence or wrongful act.

- Losses of government property resulting from theft, embezzlement or unauthorized use.
- Fines, penalties, judgments and other litigation costs arising from contractor or subcontractor noncompliance with environmental laws, where the contractor had the ability and resources to have complied.
- Judgments and other litigation costs stemming from common-law contractor or subcontractor negligence or misconduct giving rise to simple tort liability to third parties.
- Civil and criminal penalties assessed pursuant to the Price-Anderson Amendments Act of 1988, Public Law No. 100-408, sections 17-18, 42 U.S.C. 2273, 2282 (Price-Anderson Amendments) and costs of litigation involving such penalties. M&O contractors would otherwise continue to be indemnified against public liability for a nuclear incident as specified under Price-Anderson. (Under the Price-Anderson Amendments the Secretary of Energy is authorized to impose civil fines on certain government contractors for violations of applicable DOE nuclear safety rules, regulations and orders.)
- Cost of insurance for nonreimbursable avoidable costs.

Other Accountability NOPR Provisions (January 26, 1990)

- A ceiling was placed on the liability of the contractor for avoidable costs incurred under this proposal. This ceiling was equal to the maximum available award fee for the applicable six month evaluation period.
- The contractor would be required to provide a financial guarantee that it could satisfy any current liability or potential future liability discovered after the award fee period ends or after the contract expires or is terminated.
- A "non-profit" M&O contractor was defined as one which receives no fee and is considered non-profit under the laws of the jurisdiction where it is incorporated, and if it is a subsidiary, it is a subsidiary of a company which is considered non-profit under the laws of the jurisdiction where it is incorporated.

2. Description of The Award Fee NOPR (May 24, 1990)

The Award Fee NOPR specified certain changes in the award fee structure, created new categories of facilities operated by profit making M&O contractors and updated the award fee schedule to recognize the effects of inflation from 1983 to 1989. The fee schedule in the Award Fee NOPR was designed, as indicated

below, to encourage contractors, through financial incentives, to achieve a higher level of performance. Larger award fee amounts would be available for performance above acceptable, or "Satisfactory," levels than are available under the current system. As a further disincentive to unacceptable performance below expected levels, M&O contractors that achieve ratings below the Unsatisfactory or "Marginal" level would not only earn no award fee, but could be required to repay DOE up to one-half of the Basic Fee previously negotiated. Specifically, the proposed Award Fee NOPR provided as follows:

- The techniques for converting a fee objective for a cost-plus-fixed fee (CPFF) contract to a fee objective for an award fee arrangement were revised. A new award fee approach was proposed which replaced the existing award fee approach for M&O contracts.

• Instead of the current award fee concept which incorporates a flexible base fee that is established at a level of up to 50% of what would otherwise be a negotiated fixed fee, DOE and the contractor would negotiate a new Basic Fee, which would be about equivalent to the amount of the entire fixed fee under the current CPFF arrangement.

• This negotiated fee would, by definition, be that amount considered reasonable compensation for "acceptable" performance; that is, performance at the "Satisfactory" level.

• Fifty percent of this negotiated Basic Fee would be regarded as comparable to the existing base fee, which the contractor is guaranteed today without consideration of the level of contract performance. The remaining fifty percent was, as explained below, to be "at risk" if the contractor's performance falls below the "Satisfactory" level.

• In addition to the Basic Fee, an award fee pool would be available to be awarded, within the discretion of the Fee Determining Official, to the contractor for performance above the "acceptable" level. The contractor would earn some portion of this award fee only if its performance were judged to be at or above the "Satisfactory" level.

• In order to ensure a contractor's commitment to achieve or maintain at least a "Satisfactory" performance level, for marginal or unsatisfactory performance, the contractor would be required to refund to DOE a percentage of the negotiated Basic Fee paid the contractor. The amount of negotiated Basic Fee which the contractor would be required to return would increase as the contractor's performance deteriorates,

up to a 50% rebate for totally unsatisfactory performance.

- The method of determining the award fee pool would differ significantly from the award fee determination approach now in use. Current procedures provide that DOE and the contractor first agree upon an Initial Fixed Fee ("IFF") as if the arrangement were a "Fixed Fee" contract only. Under the current system, the contractor may take no more than 50% of this amount as a base fee, with the amount available as the award fee varying with the contractor's agreement to accept a base fee lower than this maximum 50% of the fixed fee. To the extent the amount of base fee guaranteed to a contractor is reduced, the potential award fee available to that contractor will be increased. To convert a Fixed Fee contract to the award fee approach, this fixed fee amount is divided into two portions. As a first step, a "Base Fee" is established in an amount from 50% to 0% of the fixed fee. As a second step, the potential available award fee is then established as a pool which can vary from 100% of the IFF when the base fee is set at the maximum 50% of the IFF to 200% of the IFF when there is no base fee guaranteed to the contractor. The following chart illustrates this concept:

CURRENT AWARD FEE CONCEPT

Initial fixed fee % IFF	Base fee % of IFF	Award pool % of IFF	Total fee % of IFF
100	50	100	150
100	30	140	170
100	10	180	190
100	0	200	200

Under the new system set forth in the Award Fee NOPR, the available award fee pool would be established by a single fixed factor, without a reduction to allow for an award fee, which would be applied to the negotiated new "Basic Fee."¹

- The percentage of the Basic Fee for calculating the available award fee pool would be determined by the type of DOE facility being managed and operated by a contractor, without a reduction in the Basic Fee. The following were the proposed percentages and applicable categories of facilities:

¹ "Basic Fee" was a new concept intended to reflect the refundable feature of a portion of the fixed fee provided under the proposed fee arrangement and is not to be confused with the traditional "Base Fee" which will comprise 50% of the "Basic Fee."

[In percent]

	Basic fee	Award fee
Defense facility—A.....	100	200
Defense Facility—B.....	100	150
Enrichment Plant.....	100	150
Miscellaneous.....	100	100

• DOE's Procurement Executive would determine the category in which each facility should be placed. In making that determination under the Award FEE NOPR, the Procurement Executive would consider, among other things: (1) whether a facility, or a portion of a facility, is on the United States Environmental Protection Agency's National Priorities List; (2) whether the contractor's work involves environmental restoration; (3) the quantity and type of Government property; (4) the size of the facility in relationship to the areas of risks; and (5) a contractor's possible liability to third parties while performing work under the contract. All enrichment plants were proposed to be assigned to the Enrichment Plant category. Other M&O contract facilities and services would be assigned to specific categories by the Procurement Executive on a case-by-case basis. The award fee available to a contractor would depend upon the category to which its facility was assigned.

• The following chart illustrates the maximum percentage of fee available under the Award Fee NOPR concept.

PROPOSED NEW FEE CONCEPT

Category	Negotiated basic fee (NBF)	Available award pool (% of NBF)	Potential total fee (% of NBF)
Defense Facility—A.....	100	200	300
Defense Facility—B.....	100	150	250
Enrichment Plant.....	100	150	250
Miscellaneous.....	100	100	200

• The proposed system would continue to use the existing fee schedules and policies to establish the negotiation objective for the Basic Fee. Under the Award Fee NOPR, however, the Basic Fee would not have to be reduced prior to a performance period in order to establish higher award fee pools.

• Since the current fee schedules were last updated in 1983 to reflect the economic impact of inflation through 1982, the fee schedules would be

adjusted to reflect the impact of inflation from 1983 through 1989.

• The proposed concept would continue to use the newly revised award fee evaluation and determination system substantially put in place by DOE as of October 1, 1989 which places greater emphasis on ES&H and contractor self-assessment, among other things. The adjectives to be used to describe performance levels would be standardized as shown on Attachment 1 to this Section I. (See "Attachment 1" to section II for a comparison of today's RPR's Fee Conversion Table.) Attachment 2 to this Section I provides a narrative description of the expected performance for each adjective: Outstanding, Good, Satisfactory, Marginal, and Unsatisfactory. Points earned as a result of performance evaluations would be based on a scale of 0 to 100, as is currently the norm. However, in converting these points to the percentage of award fee pool earned, standard conversion factors, also shown on Attachment 1, were proposed to be adopted for all contracts using the new award fee pool concept. The proposed conversion scale under the Award Fee NOPR was straight line, with each performance point worth 5% of the available pool. As shown on Attachment 1, 0-25% of the pool would be payable for Satisfactory performance; 30-75% for a Good performance; and 80-100% for Outstanding performance.

• Performance below the "Acceptable" level could result in a refund of part of the negotiated Basic Fee already paid. Under current procedures, that contractor would simply earn a lower level of award fee but would not be required to return funds.

• Without considering the impacts of the inflation adjustments to the fee schedules, contractors would have to average a score of approximately 86 (Good performance) or higher before the total fees paid (basic plus award fee) would exceed those paid under the current system. Thus, any higher fees ultimately paid under the proposed rule would be in the public interest since they would result from improved performance by the contractor.

3. DOE's Decision to Combine Accountability and Award Fee NOPR's into One RPR

DOE understood when it undertook the review of the overall contractual relationship that exposing an M&O contractor to greater risk would require an examination of whether M&O contractors should receive commensurately greater benefits. The

two NOPRs, therefore, are in many respects companion parts. Any final rule will require that a contractor incorporate all of the provisions of this RPR, including those which require assumption of greater financial risks, in order to obtain the benefits of enhanced award fee arrangement. In fact, the Award Fee NOPR specifically provided that the NOPRs would be finalized as one rule:

The Accountability NOPR stated DOE's intent to place greater risk on its profit making M&O contractors, and recognized the need to reconsider DOE's overall contractual relationship, including the appropriate balance between risks and benefits. Today's proposed rulemaking presents an enhanced award fee structure with the potential for M&O contractors to earn higher fees in order to reflect the increased risks assumed by contractors in the event that the changes presented in the Accountability NOPR are adopted. Because the policy changes set forth in these two rulemakings are so closely interrelated, DOE proposes to implement the enhanced award fee structure presented in this rulemaking simultaneously with the implementation of policy changes set forth in the Accountability NOPR. DOE intends to increase available award fees only to the extent that regulations are adopted which place upon M&O contractors greater accountability for performance and expanded risk for nonreimbursement of costs.

In making its decisions to issue a RPR prior to promulgation of a final rule, DOE considered (i) the large number of comments received; (ii) the changes it believed necessary as a result of those comments; and (iii) the fact that the concept of complete indemnification for non-nuclear contractor risk has never in its forty-five year history been assessed and analyzed. Furthermore, the interrelationship of the two NOPRs and the necessity to strike a balance between potential risks and rewards suggested the desirability of combining the two prior proposals into a single revised proposal. Because of the importance DOE places on these proposed changes in its overall relationship with its M&O contractors, today's RPR addresses comments previously received, presents the revisions it presently intends to make to its rules and solicits final additional comments.

Attachment 1—Performance Scores/Standard Adjectives/Fee Conversion Factors (as proposed in the Award Fee NOPR issued May 24, 1990)

Performance score	Percent of award fee earned
100	100.0
99	95.0

Performance score		Percent of award fee earned
93	Outstanding	90.0
97		85.0
96		80.0
95		75.0
94	Good	70.0
93		65.0
92		60.0
91		55.0
90		50.0
89		45.0
88		40.0
87		35.0
86		30.0
85		25.0
84	Satisfactory	20.0
83		15.0
82		10.0
81		5.0
76-80		0.0

Performance score		Percent of basic fee refunded
75	Marginal	5.0
74		10.0
73		15.0
72		20.0
71		25.0
70		30.0
69		35.5
68		40.0
67		45.0
66		50.0
Below 65	Unsatisfactory	50.0

Performance scores should be rounded to the nearest tenth of a point and the percent of award fee determined accordingly (e.g., a score of 88.4 equals 42.0% of award fee earned).

Attachment 2—Narrative Description of Performance Adjectives

Adjective	Definition (performance description)
Outstanding...	Performance substantially exceeds expected levels of performance. Several significant or notable achievements exist. No notable deficiencies in performance.
Good.....	Performance exceeds expected levels and some notable achievements exist. Although some notable deficiencies may exist, no significant deficiencies exist.
Satisfactory...	Performance meets expected levels. Minimum standards are exceeded and "good practices" are evident in contract operations. Notable achievements or notable deficiencies may or may not exist.
Marginal.....	Performance is less than expected. No notable achievements exist; however, some notable deficiencies exist, or any notable achievements which exist are more than offset by significant or notable deficiencies.

Adjective	Definition (performance description)
Unsatisfactory.	Performance is below minimum acceptable levels. Significant deficiencies causing severe impacts on mission capabilities exist. Performance at this level in any area mentioned in the Performance Evaluation Plan may result in a decision by the Fee Determination Official to withhold all award fees for the period.

Definitions

Significant: This term indicates a major event or sustained level of performance which, due to its importance, has a substantial positive or negative impact on the contractor's ability to carry out its mission.

Notable: This term indicates an event or sustained level of performance which is of lesser importance than a "significant" event, but nonetheless deserves positive or negative recognition.

II. Analysis of Public Comments

DOE appreciates the detailed and thoughtful comments received from the public in response to its Accountability and Award Fee NPRs. DOE has carefully reviewed and analyzed all sixty-one of the comments received. In its internal review process, DOE has weighed the suggestions and recommended changes proposed by the commenters against its initial policy reasons for fashioning the Accountability and Award Fee NPRs as it did. Because of the importance of the two proposed rules, DOE carefully attempted to discern the rationale given by each commenter who took issue with certain provisions in the NPRs. Where it was deemed appropriate, therefore, DOE has revised certain provisions of the NPRs, in whole or in part, in those instances in which the reasons provided by commenters were thought to be compelling. DOE did not change or modify its position in those areas which were the foundation for the achievement of greater contractor accountability or where DOE concluded that its goal to provide additional management tools to promote performance above expected levels would be compromised.

DOE's responses to issues raised by the commenters are hereafter addressed in some detail, underscoring the importance DOE places upon those comments.

1. Accountability NPR Fines and Penalties

DOE proposed that fines, penalties, judgments, settlements and related litigation costs (including attorneys fees) should be unallowable if the fine or penalty resulted from contractor or subcontractor negligence provided that

such negligence or misconduct did not occur as the result of complying with formal DOE direction or guidance. Moreover, the breach of the contractor's legal duty giving rise to the liability must involve an area of responsibility clearly placed on the M&O contractor. If a third party, other than DOE, contributed to the negligence or misconduct, the contractor will not be reimbursed by DOE.

Comments: Twelve commenters questioned whether ordinary negligence was an appropriate standard for disallowing the costs incurred by M&O contractors for fines and penalties. It was suggested that DOE should determine that costs are unallowable only when they result from fines and penalties that have been incurred as the result of a knowing violation of the law. Some commenters urged that only those fines and penalties associated with environmental, safety or health violations should be unallowable costs.

DOE intended to take a broader approach to the issue of fines and penalties by not limiting unallowability based upon categories or criminal standards such as a "knowing" violation. In order to encourage a higher standard of accountability with respect to laws and regulations on the part of our M&O contractors, DOE determined that it was most appropriate for contractors to assume direct responsibility for the consequences of their actions in almost all cases. Today's RPR proposes far more specific guidelines for determining whether a fine or penalty is an unallowable cost, while at the same time allowing for an independent determination to be made by the Contracting Officer in each case. For instance, the Contracting Officer can, among other things, take into consideration whether: (i) the contractor voluntarily informed the Contracting Officer in a timely and good faith manner of the condition or activities which later resulted in the fine or penalty; (ii) the contractor was new to the site; (iii) the assessment of the fine or penalty was due solely to the contractor's common law negligence or wrongdoing, not from a strict liability standard imposed by law; (iv) whether DOE contributed to the contractor's actions or inactions; (v) the act or failure to act resulted from written direction by the Contracting Officer; or (vi) the act or failure to act resulted from the negligence of the contractor or subcontractor, or other third parties. This more flexible approach was also expanded to the determination of all avoidable costs by the addition of new

proposed DEAR section 970.3102.22, Determination of Avoidable Costs.

Although this flexibility introduces a certain lack of specificity into the process of cost allowability determination, it permits more flexibility and added fairness for unusual or unforeseeable circumstances. For example, some fines and penalties may have been incurred for reasons that reflect decisions regarding national security. The Contracting Officer can take these and other relevant facts into consideration before making a final decision. However, no situations are anticipated where the Contracting Officer would determine that a criminal fine or penalty is allowable under the new proposed guidelines.

Comments: Seven commenters urged DOE to consider and respond to the situation where DOE orders a contractor to continue to operate after a potential violation is reported by the contractor or alleged by a governmental entity, such as a state regulatory agency or the United States Environmental Protection Agency.

M&O contractors for DOE facilities occupy an unusual position in the realm of government contractors in that they operate government-owned facilities and have broad responsibility in assisting DOE in performing its mission. Because of this, they lack control over funding, authorizations, and even to some extent the hiring and control of their own employees. Furthermore, they operate in a heavily regulated environment in which statutes, regulations, and contract provisions often mandate the manner in which they can perform their work. DOE, however, has concluded that contractors can and must operate these facilities in full compliance with all laws. DOE never intended to place its contractors in a "no win" situation in which actions that are mandated by the agency or by the contract result in unavoidable fines and penalties that are unallowable costs under the contract. The RPR clearly provides exceptions for extraordinary situations where DOE must require a contractor to perform a specific task with the result that possible violations of law may occur, in order to fulfill the agency's national defense mission. Although a contractor may not be permitted to stop work under extreme circumstances involving national security, the Contracting Officer will, under the RPR, retain the discretion, after evaluation of all of the facts and circumstances, to reimburse the contractor. Moreover, the final rule does not make unallowable those fines and penalties which were truly unavoidable

by the contractor, such as those resulting from DOE's actions or failure to act. Needless to say, the Contracting Officer has no legal or contractual basis for authorizing contractors to violate public laws and regulations.

Comments: Seven commenters expressed concern over the consequences of a contractor voluntarily informing DOE of a noncompliant situation.

The Accountability NOPR did not adequately address the issue of contractor notification of noncompliance. The RPR guidelines under which the Contracting Officer will consider cost allowability place considerable emphasis on whether a contractor has informed DOE of noncompliance in a timely, good faith manner. Good faith disclosure and self evaluation are key factors to be considered in determining the consequences of the disclosure.

Comments: Three commenters wanted to know how DOE would deal with fines or penalties incurred by a new contractor which recently entered into a contract to operate a facility and presumably needs more time to assess deficiencies and compliance problems.

DOE recognizes the risks and uncertainties inherent in assuming operation of aging facilities at which environmental considerations were not always given their present priority. Start up periods for new contractors will be a major factor to be considered by the Contracting Officers in their evaluation of whether fines or penalties should be allowable costs. A phase-in period, not to exceed one year, may be negotiated into agreements with new contractors at a site. The Contracting Officer may take into account extended periods for conditions which preexisted the contractor's presence and of which the contractor could not reasonably be expected to be aware.

Comments: Two commenters wanted to know specifically whether fines and penalties incurred by subcontractors who are hired by profit making M&O contractors may be considered allowable costs if reimbursed by the prime M&O contractor.

Fines and penalties incurred by M&O subcontractors which would be unallowable if incurred by the prime contractor are not allowable costs under the rule proposed today unless the subcontractor is a non-profit contractor or a small or small disadvantaged business. Reimbursement of fines and penalties incurred by a subcontractor and which otherwise are unallowable costs is strictly a contractual issue

between the prime and its subcontractors.

Comments: Seven commenters expressed concern over the reimbursement of fines and penalties imposed upon a contractor who had previously notified DOE of an instance of noncompliance which was not rectified prior to the imposition of a fine or penalty because of the failure to provide adequate funding.

The Accountability NOPR did not specifically address the situation described by the commenters. While the RPR does not provide for blanket cost allowability in situations where the contractor timely notified appropriate persons of compliance problems, it does allow the Contracting Officer to use discretion in determining that the cost is allowable. This would almost certainly be the case when the noncompliance could have been rectified had adequate funding been available for that purpose. The Contracting Officer may consider all relevant factors in arriving at a decision with respect to cost allowability.

Insurance

The Accountability NOPR provided that the cost of insurance which would protect or reimburse the contractor against unallowable cost, is also an unallowable cost.

Comments: Three commenters wanted to know why DOE is unwilling to pay the costs of insurance for protection against costs and liabilities which are now being made unallowable, particularly in light of the fact that the Government has in the past been self insured. These commenters argued that the government's practice of self-insurance results in lower costs to the taxpayers.

It would be inconsistent for DOE to disallow a cost and then reimburse the contractor for the cost of insuring against that disallowed cost. To provide otherwise would have the effect of neutralizing the very incentive for accountability DOE is attempting to foster in its M&O contractors. It would greatly mislead the public to say that a contractor is being made accountable for its actions when in fact the taxpayers are picking up the tab for the insurance costs to protect the contractor from the same risk. In fact, the additional expense of insurance premiums would likely be greater than if the government remained a self-insurer and continued to indemnify M&O contractors against their avoidable costs. The RPR places certain risks on the contractor when the contractor is in a better position to evaluate the risk and

take the necessary actions to avoid, minimize or eliminate those risks. DOE simply cannot reimburse the contractor for the costs of insurance against the very risks we are asking the contractor to assume. DOE is determined to depart from the policy of self-insurance because the goal of this rulemaking is greater accountability on the part of M&O contractors, particularly in the areas of environment, safety and health. In any event, the outside limits of the contractors' liability is known and fixed by the liability cap. In the event the contractor elects to insure against nonreimbursable costs, the premiums for such insurance are properly a portion of the contractor's overhead, to be offset against his profits in the same manner as most commercial manufacturers are required to do.

Comments: Eleven commenters asked whether increased award fees will cover increased costs due to additional risks placed on M&O contractors and whether DOE will be paying an appropriate price for greater contractor accountability.

DOE appreciates the increased exposure potentially imposed upon profit making M&O contractors by the Accountability NOPR. These greater risks require that the contractor have the opportunity to earn enhanced award fees. It is DOE's belief that the higher fees proposed in the Award Fee NOPR provide the fair profit expectation for these contractors in return for their increased risks and insurance costs. DOE has determined that the potentially increased costs to the Government under the Award Fee NOPR are adequately balanced if the resulting increase in contractor accountability also provides substantial benefits to society, particularly with respect to environment, safety and health.

Comments: Two commenters pointed out that under the Accountability NOPR, contractors would not be reimbursed for the cost of payment and performance bonds, which may be necessary in order to obtain other insurance.

The Accountability NOPR did not specifically address this issue. Under the RPR, it is proposed that Contracting Officers would have the authority to reimburse a contractor or subcontractor for obtaining payment or performance bonds and insurance, in special situations, when obtained at the Contracting Officer's specific written direction after a determination that the costs are necessary and in the best interest of the Government.

Comments: Six commenters stated that in some situations insurance may be commercially unavailable. In such cases contractors might be unwilling to

do business with DOE without indemnification.

DOE recognizes that in some cases insurance may be commercially unobtainable. For example, certain environmental statutes place significant regulatory requirements on contractors. However, the contractors are not being asked to incur unlimited exposure; there is a ceiling on contractor liability, as discussed below. In effect, the profit making M&O contractor is being asked to incur the deductible portion of an insurance policy while the government remains the self-insurer for the unlimited remaining portion of any exposure.

Liability Cap

The Accountability NOPR placed a ceiling on the liability of M&O contractors for unallowable avoidable costs incurred equal to the maximum potentially available award fee for the applicable six month evaluation period. The contractor was required to provide a guarantee that it could satisfy any current liability or potential future liability discovered after the award fee period or after the contract terminated or expired.

Comments: Five commenters argued that the liability cap should be lower, and suggested a cap consisting of the award fee actually earned in the applicable period. On the other hand, two commenters argued that liability should be without limit, especially in the case of criminal fines or penalties.

Under the RPR, there is no limitation on the amount of criminal fines and penalties which may be disallowed. As for other unallowable costs and expenses resulting from the application of this RPR, the liability cap has been set in the RPR at the amount of the actual award fee earned plus the actual basic fee earned during the six-month award fee period in question. DOE has determined that a limitation on disallowance of the entire award fee available is no longer appropriate since the restructuring of fees under the Award Fee NOPR. The RPR, therefore, limits the contractor's risk to the fee or profit earned. The costs imposed or incurred under the Price-Anderson Amendments and the Major Fraud Act of 1988, section 8, 41 U.S.C. 256 (Major Fraud Act), will not be limited except as provided in regulations implementing those provisions.

Comments: Four commenters wanted to know what type of financial guarantee would have to be provided by the M&O contractors, and in what amount.

DOE has left the amount and nature of the financial guarantee in the discretion

of the Contracting Officer after consultation with the contractor. In addition, under this proposed rule the contractor will have the option of authorizing DOE to retain a percentage of its fee to satisfy the financial responsibility requirements. M&O contractors operate under a wide variety of conditions with regard to risk. The contractors often have widely disparate financial structures. Some contractors are new, while many have operated their respective facilities for long periods of time. This may affect their perception of the risk being undertaken. The appropriateness of a financial guarantee is a business decision to be made on a case-by-case basis. For example, a contractor may decide a retainage of a percentage of the fee is appropriate (or invoicing for less than the full fee earned). In addition, other types of arrangements a contractor may wish to consider include (i) letters of credit, (ii) corporate guarantees from financially responsible parent corporations, (iii) performance bonds, or (iv) other similar financial arrangements. The financial responsibility obligation will remain for up to one year after the expiration or termination of a contract.

Comments: Three commenters argued that because the liability cap is tied to the award fee, the contractors will be driven to negotiate for larger basic fees relative to the award fees, reducing the incentive effect of the award fee.

Under today's RPR, as indicated above, it is proposed that the contractor's risk be limited to the award fee and basic fee actually earned. Therefore, the incentive for seeking a reduced award fee in exchange for a larger basic fee is eliminated. The Award Fee NOPR, in any event, did not allow the contractor the flexibility to negotiate award fee—basic fee percentages. Today's RPR retains that concept.

Comments: Eleven commenters raised questions as to exactly how the liability cap for a particular period will correspond to costs or liabilities due to events that are not discrete and severable, and the length of time that such liability will continue into the future.

The Accountability NOPR anticipated this issue and provided as follows:

In the case of continuing activities of the contractor which occur over a number of evaluation periods and result in costs or liabilities described above, the potential financial risk of the contractor shall be limited to the amount of the award fee which was available in the single evaluation period when the incident or event giving rise to the

contractor's disallowed cost or expense took place. If it is not possible to relate or reasonably allocate particular activities to individual evaluation periods, the financial risk of the contractor shall be limited to the amount of the award fee which was available in the evaluation period when the amount of nonreimbursable costs or liabilities were finally determined. If such determination is made following the expiration of a contract, or the contractor is otherwise replaced, the available award fee for the last evaluation period that the contract was in effect shall be utilized, after deducting such disallowed costs as were previously charged to that period.

Today's RPR retains and refines this concept, but references to "available" award fee will be changed to "actual" fee earned.

DOE has determined that a period of up to one year after contract expiration or termination is an appropriate period of time for the contractor to continue its financial responsibility obligation to assure payment to DOE of avoidable costs, such as damage to government property. However, the authority of DOE to refuse to reimburse a contractor for otherwise disallowed costs, such as fines and penalties or third party liability, shall continue indefinitely.

Comments: Two commenters argued that since the extent of a contractor's liability is going to be tied to the available award fee, the award fee determination should be subject to the disputes clause.

Under today's RPR, the limitation of liability has been tied to the amount of fee actually earned for an award fee period, thereby significantly reducing the risk to the contractor. It is important to distinguish between the mechanism used to determine the limitation of liability (which happens to be the amount of fee actually earned) from the disallowance of certain avoidable costs and the obligation to pay such costs. The latter cost disallowance is clearly subject to the Contract Disputes Act of 1978, Pub. L. No. 95-563, 41 U.S.C. 601, *et seq.* (Contract Disputes Act). The award fee determination, on the other hand, is governed by a different set of rules, including the Department's discretion, and is made independent of any cost determinations which are subject to the disputes clause.

Comments: Eight commenters noted that since costs and liabilities naturally flow down from M&O contractors to their subcontractors, DOE should establish a rule with respect to a liability cap for subcontractors who will not otherwise be able to continue to do business with DOE M&O contractors.

Disallowed costs caused or incurred by profit making subcontractors are within the M&O contractor's limitation

of liability. Subcontractors are free to negotiate their contractual relationship with prime contractors in order to delineate the party who bears the ultimate financial exposure for disallowed costs. If fewer subcontractors are willing to enter into arrangements with primes, primes will have to offer more favorable conditions. In any case, the fee received by subcontractors from the prime is an allowable cost under the prime contract. The relationship between a prime and its subcontractors (whether cost-plus or fixed-price) should not be controlled by DOE, except to the extent that small and small disadvantaged businesses are excluded from the cost disallowance provisions.

Litigation Costs and Control

In the Accountability NOPR DOE did not provide draft language concerning litigation costs and control of litigation. DOE, however, did solicit comments from the public on the issue of litigation control and costs. DOE specifically asked whether a contractor's refusal to allow DOE to control specific litigation should result in a waiver of claims for reimbursement, even in those cases where the ceiling in disallowance has not been reached.

Comments: Ten commenters felt that in those situations in which DOE retains control of the litigation, DOE should assume financial liability.

The Department is in agreement with the commenters on this issue. If DOE assumes control of litigation, it is appropriate that the agency should also assume liability for litigation costs and potential damages notwithstanding the ceiling or potential deductible. This new approach is reflected in today's RPR. It would be inappropriate for DOE to control a contractor's litigation, including its strategy, its expert witnesses, its defenses and even its selection of private counsel and then disallow the costs. Consequently, costs, including judgment or settlement amounts, incurred in cases where DOE controls or directs the litigation will be reimbursable in their entirety and not subject to the deductible based upon the amount of fee earned. If litigation is settled with DOE approval, the apportionment of costs and the settlement amount will be a matter for negotiation between the contractor and the Contracting Officer. This aspect of the RPR is subject, of course, to the prohibitions contained in the non-reimbursement costs provisions of the Major Fraud Act.

Comments: Three commenters wanted to know who would bear the expense of

litigation while negligence remains to be determined.

Under the Accountability NOPR, the contractor would have to pay for all costs associated with the litigation and seek to recoup those costs from the Government afterward. The RPR retains this system of reimbursement where the Contracting Officer *initially* determines that these are avoidable costs and thus unallowable. The contractor, however, may request that DOE approve a settlement at any time during the litigation process. If DOE approves the settlement, the contractor and DOE will agree on the appropriate allocation of financial responsibility.

Comments: Five commenters argued that contractors should not be deemed to have waived their rights to reimbursement of litigation costs when they retain control of the litigation.

Under today's RPR, it is proposed that a contractor's retention of control of litigation does not automatically result in loss of rights to reimbursement of litigation costs or judgment amounts which are below the liability cap. Possible loss of rights to reimbursement of litigation costs and judgments based upon findings of the contractor's negligence or wrongdoing will be determined by the Contracting Officer, with assistance from DOE's legal staff, independent of any administrative or judicial finding of negligence or other wrongdoing. Under today's RPR, the contractor is eligible, but not assured, of reimbursement for the costs of litigation when the outcome of the litigation is favorable. Reimbursement, however, is still subject to the nonreimbursement provisions of the Major Fraud Act.

Comments: Three commenters asked questions relating to the handling of litigation costs involving subcontractors under the new rules.

Under today's RPR the cost of litigation incurred by subcontractors will be reimbursed to the same extent that prime contractors would be reimbursed.

Comments: Three commenters argued that new contractors should not be liable for costs of litigation due to legal actions resulting from pre-existing site conditions where the contractor inherited problems that resulted in the litigation.

DOE agrees, subject to a reasonable transition period. Under today's RPR, if the contractor is not in any way responsible for the environmental damage that is the basis for the legal action, the contractor will either not be named a party to the action or not be held liable. In the latter case, the contractor would be able to recoup the

costs of litigation from DOE. In those cases in which a statute imposes strict liability, the law has been designed to place legal responsibility on any party that had an opportunity to avoid the damage or loss, so fault is not an issue in such cases and under the RPR the Contracting Officer will determine whether reimbursement by DOE is appropriate. Finally, the RPR includes a phase-in time period before full contractor responsibility for the new site (not to exceed one year).

Government Property

DOE proposed that direct costs and expenses resulting from damage to government property as a direct result of contractor or subcontractor ordinary negligence should not be reimbursed.

Comments: Ten commenters objected to the proposal because it deviates from standard government practice.

DOE recognizes that standard government contracts generally do not make contractors liable for damage to government property. However, DOE M&O contracting has historically been a unique area of government contracting, one with a discrete set of rules and regulations compared to those applied in more traditional government contracts. If the agency is to achieve its goal of inducing its contractors to greater excellence in performance, it will be necessary to shift certain risks to the contractor that have traditionally been borne by the Government. Consequently it will be necessary to be different from the FAR to the extent that these regulations do not contemplate such a shift in responsibility.

Comments: Five commenters argued that damage to, and loss of property are ordinary costs of doing business in the everyday world. These commenters felt that such costs are likely to be less in the long run than the costs necessary to implement measures designed to avoid them.

DOE firmly disagrees with these comments. The fact is that while such damages and losses may be deemed the cost of doing business, they are borne by the party responsible in the ordinary business world. A commercial manufacturer would expect to add such expenses to its overhead, which in turn would tend to reduce its profits. In conducting DOE's business in a manner more like that of the private sector, DOE anticipates achieving results that demonstrate higher standards of efficiency and better performance. By shifting these losses to the contractor, DOE also expects a benefit in the form of protection against even greater losses over the long term. DOE does not anticipate approving impractical

measures proposed to assure that government property is not damaged or lost.

Comments: Five commenters maintained that M&O contractors cannot adequately protect against losses to government property because they do not control use, maintenance, repair and replacement of the property.

In fact, DOE contemplates holding contractors responsible only for losses to government property due to negligence or theft in those instances where such acts, and the property, are totally under contractor control. Losses and expenses resulting from ordinary wear and tear would continue to be reimbursable or not charged to the contractor's account.

Comments: Four commenters asked for clarification on how the property in question would be valued. They pointed out that, in many instances, the conditions and value of the property over which they assume control are not known.

Although the final decision will be left to the Contracting Officer's discretion in determining the amount of damage to government property, DOE believes that the depreciated value (or book value, as appropriate), as opposed to replacement cost, should be determinative. The general objective will be to place the damaged property in the same working condition that existed prior to the damage being incurred, but not to place it in a new or improved condition.

Subcontractors

In the five major categories of M&O contractor liabilities for avoidable costs, the Accountability NOPR made M&O contractors responsible for the acts of its subcontractors.

Comments: Sixteen commenters pointed out that under the Accountability NOPR, small and small disadvantaged businesses would often be unable to subcontract with M&O contractors because the added liabilities would flow down to subcontractors and the subcontractors would often be unable to obtain insurance or effectively self-insure due to their size.

DOE recognizes that small subcontractors would face limitations in obtaining insurance commercially and in self-insuring. Today's RPR offers an exemption for M&O subcontractors that are small and small disadvantaged contractors (as these terms are defined in the FAR section 19.001) to minimize the adverse impact of the rule on small and small disadvantaged businesses. These contractors, for instance, will be reimbursed for the cost of insurance or obtaining appropriate bonding.

Comments: Nine of the commenters argued that there will be fewer M&O subcontractors and that the contracts between M&Os and their subcontractors will cost more because liability under the NOPR will flow down to the subcontractors, while the enhanced award fees and the liability cap will not.

So long as the prime contractors award subcontracts, the increased fees to the subcontractors are costs to DOE. The increased fees will allow subcontractors to obtain insurance or to self-insure, and allow subcontractors to remain in the M&O arena and compete for enhanced fees and greater profitability. If higher costs are incurred in contracts between M&Os and their subcontractors, DOE is satisfied that the contractor accountability on all levels will result in overall cost savings.

Comments: Four commenters requested that special indemnification be allowed for Response Action Contractors (RACs) (which clean up toxic and hazardous waste) as it is often difficult, if not impossible, for them to obtain insurance.

Today's RPR does not attempt to propose solutions regarding the issue of possible indemnification of subcontractors performing clean-up activities at DOE sites. This is the case whether the subcontractors are operating as RAC's or clean-up subcontractors under the authority of the Atomic Energy Act of 1954, 42 U.S.C. 2201 (Atomic Energy Act). There is currently an internal DOE Environmental Clean-up Task Group ("Task Group") reviewing alternative contracting methods for DOE's clean-up activities. DOE will make its determination whether or not to include RAC's in the new rules for M&O contractors after the Task Group has completed its work.

Liability for Ordinary Negligence and Third Party Liability

The Accountability NOPR defined unallowable avoidable costs to include (i) losses resulting from the ordinary negligence of the contractor or subcontractor when carrying out well-understood non-experimental work under a contract, including costs necessary to correct the error and accomplish the assigned task; and (ii) costs resulting from common law contractor or subcontractor negligence or misconduct giving rise to simple tort liability to third parties.

Comments: Fourteen commenters raised issues surrounding the lack of clarity for the negligence standard and the fact that negligence standards differ in different jurisdictions, and wanted to

know what the mechanism for final determinations of negligence would be. The commenters indicated that disputes would be more likely under the proposed rule.

DOE recognizes that the Accountability NOPR was not entirely clear with respect to either the standard or the mechanism for determining negligence. Today's RPR defines the standard as "common law negligence" and places authority for the final determination with the Contracting Officer. The standard of care imposed will be that which a reasonably prudent man would exercise in a technically complex, high risk environment. Since the determination involves a claim against the Government, a final decision must be made by the Contracting Officer under the Contract Disputes Act. The standard is specified by contract, even though it is one conceptually borrowed from tort law.

Comments: Four commenters commented that in the commercial world, the price of goods and services includes the costs of rework and employees negligence.

In the commercial sector, costs of rework and negligence are reflected in the profit which the business obtains after the deduction of these overhead expenses. The price would only reflect such additional costs if the market or competition places no limits on the ability to impose price increases. The proposed rule involves cost reimbursement contracting. These potentially increased costs, should they be incurred, will be reflected in the enhanced award fees resulting from better contractor performance. Under either commercial arrangement or these new proposed rules, the ability of the business to control avoidable costs will result in greater profits.

Comments: Nine commenters argued that M&O contractors lack the control over employees, subcontractors, other prime contractors, and third parties necessary to avoid incurring costs due to employee negligence, rework, and third party liability.

With respect to new contractors taking over a site, DOE has recognized a problem of control for the contractor. Today's RPR, as indicated above, contains a provision to allow for a grace period for new contractors before placing responsibility on the contractors for the employees already at the site. With respect to all other contractors, the problems of control at this level are no different than those faced in the private sector. The contractor is in the best position to avoid these kinds of costs, and this is precisely the kind of responsibility it is being paid to assume.

Level of Employee Responsibility

The Accountability NOPR holds the contractor responsible for the actions or inactions of contractor and subcontractor personnel that result in unallowable avoidable costs.

Comments: Sixteen commenters pointed out that placing responsibility for negligent loss and theft of government property, ordinary negligence, and third party liability down to the lowest level employee represents a deviation from contracting principles in the FAR.

DOE recognizes that the FAR maintains a standard for liability in these cost categories for high level employees such as officers, directors, and plant managers. M&O contracting has from its inception been an area of government contracting filled with exceptions and special rules due to the unusual nature of its mission. The agency, in this RPR, is attempting to shift responsibility and risk to the contractors in order to encourage greater accountability and improved performance. The RPR makes the M&O environment more like that of the private sector in which an employer is responsible for the actions of his employees. The contractor is in the best position to ensure quality employee performance at intermediate and lower levels through adequate programs of hiring, training and supervision.

Comments: Seven commenters argued that contractors lack adequate control over employee hiring, management and work standards to allow for these companies to be able to practice risk management at the individual employee level.

In those instances where a new contractor has taken over a facility, DOE recognizes the difficulties a contractor faces in assessing the situation and taking appropriate action to avoid incurring unnecessary costs. Today's RPR provides a grace period for new contractors, within the discretion of the Contracting Officer, but not to exceed one year.

Direction From The Contracting Officer

Under the Accountability NOPR, specific directions from the Contracting Officer will relieve the M&O contractor from having to absorb otherwise unallowable avoidable costs.

Comments: One commenter stated that in the M&O environment, directions from DOE do not usually come from the Contracting Officer and, in fact, specific written direction from the Contracting Officer is likely only in very rare cases.

DOE does not believe that this is a correct description of the day-to-day

workings in an M&O environment. First, the DOE operations office manager is usually the Contracting Officer for M&O contracts. Second, the M&O contractor works under a very broad "statement of work." The M&O contractor carries out a substantial portion of its work without direct or specific DOE supervision. Third, if a situation arises where the M&O contractor receives directions from a DOE employee it will be in those important areas or at critical times where it is necessary for DOE to provide direction in order to ensure the performance desired by DOE. Those DOE employees giving such directions should be acting within the scope of their authority as delegated by the Contracting Officer (the manager of the operations office). The contractor in these instances, is aware, or ought to be aware, of whether the DOE employee is acting within his or her delegated authority. Most M&O contractors are experienced government contractors and should know the rules regarding the delegation and exercise of Contracting Officer authority.

Profit Making Subcontractors of Nonprofit M&O Contractors

The Accountability NOPR does not specifically address the question of the extent to which profit making subcontractors of nonprofit prime contractors are subject to the unallowable avoidable cost provisions of that NOPR.

Comments: One commenter stated that the Accountability NOPR did not address profit making subcontractors working for nonprofit M&O contractors.

Profit making subcontractors of nonprofit M&O contractors are exempt from today's RPR to the same extent as the nonprofit prime contractors.

Special Exemptions From the RPR

As indicated above, the Accountability NOPR provides that a nonprofit management and operating contractor is one which receives no fee and is considered nonprofit under the laws of the jurisdiction where it is incorporated, and if it is a subsidiary, it is a subsidiary of a company which is considered nonprofit under the laws of the jurisdiction where it is incorporated. A Contracting Officer may also treat as nonprofit a contractor which receives no fee and whose particular corporate organization or circumstances, in the judgment of the Contracting Officer, warrants such consideration. All other management and operating contractors are considered profit making.

Comments: Several M&O contractors have asked that they be exempt from the

provisions of the Accountability NOPR because of special circumstances, including a historical exemption from procurement laws and regulations. Some contractors also argue that they are really nonprofits although they did not neatly fit within the definition contained in the Accountability NOPR.

DOE is very reluctant to exempt M&O contractors from the provisions of today's RPR except in the most unusual and compelling circumstances and where it is clearly in the best interest of the Government. First, DOE has concluded that the Sandia National Laboratories (SNL), operated by AT&T Technologies, Inc. (formerly Western Electric Company, Incorporated) and Sandia Corporation (AT&T), may be an appropriate candidate for such an exemption and the exemption is reflected in today's RPR. AT&T has indicated that its motivation for operating the SNL continues to be national service. AT&T operates SNL at no fee or profit. AT&T agreed to manage SNL in 1949 at the request of President Truman. For over forty years AT&T has made a significant contribution to DOE's mission at SNL.

DOE invites comments from the public as to whether AT&T at SNL should be treated as a nonprofit for the purpose of exemption from the final rule.

Second, it was specifically requested that the Bettis Atomic Power Laboratory (Bettis) and the Knolls Atomic Power Laboratory (KAPL), both of which are part of the Naval Nuclear Propulsion (NNP) Program, be exempt from today's RPR. DOE has concluded that the contractors for Bettis and KAPL may be appropriate candidates for such an exemption and the exemption is reflected in today's RPR. These laboratories are operated by Westinghouse Electric Corporation (Westinghouse), and the General Electric Company (GE), respectively. GE and Westinghouse each have more than forty years involvement in the Naval Reactors Program. Additionally, both laboratories are single-purpose laboratories dedicated exclusively to the NNP Program, wholly dedicated as a support facility for that program.

DOE reviewed, among other things, Executive Order No. 12344 entitled "Naval Nuclear Propulsion Program." This Executive Order was signed by President Reagan on February 1, 1982 and was subsequently ratified by Congress in Public Law No. 98-525, 42 U.S.C. 7158 note. The Order provides, in part, as follows:

By the authority vested in me as President and as Commander in Chief of the Armed Forces of the United States of America, with recognition of the crucial importance to

national security of the Naval Nuclear Propulsion Program, and for the purpose of preserving the basic structure, policies, and practices developed for this Program in the past and assuring that the Program will continue to function with excellence, it is hereby ordered as follows:

* * * * *

Sec. 5. Within the Department of Energy, the Secretary of Energy shall assign to the director the responsibility of performing the functions of the Division of Naval Reactors transferred to the Department of Energy by Section 309(a) of the Department of Energy Organization Act (42 U.S.C. 7158), including assigned civilian power reactor programs, and any naval nuclear propulsion functions of the Department of Energy including:

(a) direct supervision over the Bettis and Knolls Atomic Power Laboratories, the Expanded Core Facility and naval reactor proto-type plants;

* * * * *

(e) administration of the Naval Nuclear Propulsion Program, including oversight of program support in areas such as security, nuclear safeguards and transportation, public information, procurement, logistics, and fiscal management.

DOE invites comments from the public as to whether the M&O contractors for Bettis and KAPL, GE and Westinghouse, respectively, should be treated as nonprofits for the purpose of exemption from the final rule.

2. Award Fee NOPR Compensation for Inflation

In the Award Fee NOPR DOE adjusted the fee schedules to reflect the impact of inflation from 1982 through 1989 using the GNP Price Deflator Index.

Comments: Three commenters expressed concern that the proposed rule did not fully compensate for inflation since 1982. Some commenters applied various indices to the existing fee schedules to indicate variances from DOE's proposal. Three commenters suggested that DOE should review the fee schedules on an annual basis or implement new schedules taking inflation into consideration each year.

For purposes of the RPR, DOE intends to retain the use of the GNP Price Deflator Index for the years 1982 through 1989. The GNP Price Deflator Index has been used for compensating for inflation in the fee schedules in the past. This Index expresses prices of various years as a percentage of price of a selected base year. At the time of the last adjustment of the fee schedules, the Index and formulae for adjustment were developed following an extensive study of DOE's fee policies. Essentially, the technique involves deflating each interval of estimated cost back to the base year (in this case, 1982 dollars). Next, a fee is calculated based upon existing fee schedules, which were

developed in 1982. Finally, the fee amounts are adjusted to 1989 dollars by applying the Index. This has the effect of increasing the fee amounts by a greater percentage at the upper ends of the fee schedules. That is, the fees for higher estimated cost levels are increased by a larger percentage than fees for lower cost levels. This is appropriate because of the nature of DOE's declining fee curve policy, where the fees for larger value M&O contracts are a lower percentage of estimated cost than for lower value contracts.

The fee study issued in 1982 recommended that fee schedules be adjusted every ten years. DOE's current position is that any cost index will go through periodic fluctuations which will be "dampened" over a multi-year cycle.

However, DOE will continue to review methods of compensating for the effects of inflation while the RPR is out for comment, and also will reconsider what review cycle is appropriate.

Double "Penalty"

The Accountability NOPR establishes contractor responsibility for certain unallowable avoidable costs. A contractor's performance will be reflected in the award fee and the "at risk" portions of the new Basic Fee.

As stated in the Accountability NOPR, DOE will seek to minimize the contractor's duplicative exposure to reduced award fees arising from the same facts or conditions which created the unallowable avoidable cost. When an M&O contractor timely advises DOE of incidents of weaknesses it has discovered, and voluntarily agrees that it will bear those costs, it is DOE's intention that such critical self-evaluation will be favorably considered with regard to performance for award fee purposes.

Comments: Two commenters are concerned that, in situations other than self-evaluation discussed above, the proposed Award Fee NOPR will "penalize" contractors twice, in disallowance for the unallowable avoidable costs, and in a lower fee determination.

Disallowance of cost items (e.g., fines, penalties, acts of negligence) on the one hand, and a fee determination on the other hand, are two independent concepts and events. It is unavoidable that poor performance which results in unallowable avoidable costs will impact the award fee determination. However, as already indicated above, critical self-evaluation will be considered favorably in the award fee determination process. The proposed fee structure reflects the

greater risks and potential for unallowable avoidable costs.

Appealability of Award Fee

The Award Fee NOPR follows Federal Acquisition Regulation (FAR) 16.404-2, which provides that in cost-plus-award-fee contracts "[t]he amount of the award fee to be paid is determined by the Government's judgmental evaluation of the criteria stated in the contract. This determination is made unilaterally by the Government and is not subject to the Disputes clause."

Comments: Several commenters argued that award fee determinations should be appealable. Some of the commenters argued that such determinations should be appealable under the "Disputes" clause of the contract, while one commenter argued that the right provided under the Contract Disputes Act, cannot be contracted away. The commenters statements give the appearance that the non-appealability of the award fee determinations is unique to DOE. However, DOE has adopted the policy of the Federal Acquisition Regulation (FAR) in this regard. Once the cost-plus-award-fee contract type is chosen, it is government-wide policy that these award fee determinations are not appealable. DOE has no legal or policy basis for deviating from this policy.

It is DOE's position that the award fee portion of the total fee is not appealable. DOE believes that this approach is within the letter and the spirit of the FAR and applicable laws.

Performance Objectives

To implement the objective of greater financial incentives to compensate for greater risks for M&O contractors, the Award Fee NOPR contained proposed Performance Scores/Standard Adjectives/Fee Conversion Factors.

Comments: Many of the commenters argued that the increases in the available award fee were not obtainable because of the changes made in the scoring system. A number of these commenters stated that the amount of fees which could realistically be earned under the proposed system would not balance the greater degree of risk imposed by DOE under the Accountability NOPR. On the other hand, one commenter believed that DOE was in error in offering additional fees simply because M&O contractors would be held more accountable for their actions.

DOE has evaluated these comments and is today proposing a revision to the Performance Scores/Standard Adjectives/Fee Conversion Factors. This proposed new fee schedule is

included as Attachment 1 to this section II. DOE believes that these proposed new fee conversion factors address the criticism of the commenters, in that the conversion factors now increase the amount of award fee available for scores of 88 and above, thus providing further incentive to enhance contractors performance. For example, if the amount of award fee available was \$10 million, under the Award Fee NOPR, a score of 90 would have resulted in an award fee of \$5 million. Under today's RPR, a score of 90 will earn an award fee of \$6 million. Similarly, a score of 95 under the Award Fee NOPR would have resulted in an award fee of \$7.5 million. Under today's RPR, a score of 95 will result in an award fee of \$9.4 million. DOE solicits comments regarding this revised fee schedule.

Classification Categories

The Award Fee NOPR proposed the use of categories (Defense Facility-A, Defense Facility-B, Enrichment Plant, and Miscellaneous) for classification of each of the M&O facilities.

Comments: Eight of the commenters disagreed with concept of categorizing facilities and assessing different amounts in award fee pools based upon the category. Some commenters believed that there was an inadequate number of categories or that certain categories were undervalued. Other commenters expressed concern that the factors used to determine category assignment were inappropriate. A few commenters felt that the categories should be reviewed on a regular basis. Finally, several commenters believed that one or more of the facilities were placed into the wrong category.

DOE has considered these comments but has not been convinced that any major changes are necessary to the concept of categories and classification of facilities. Several facilities may be reassigned to a different category based upon the public comments. DOE's Procurement Executive will reassign individual facilities as appropriate on a case-by-case basis.

ATTACHMENT 1.—AWARD FEE
CONVERSION TABLE

Performance score	Percent of award fee earned
Outstanding—Any score in the Outstanding category will earn 100% of the available award fee.	
96 and above	100.0
Good:	
95	94.0
94	88.0
93	82.0

ATTACHMENT 1.—AWARD FEE
CONVERSION TABLE—Continued

Performance score	Percent of award fee earned
92	75.0
91	68.0
90	60.0
89	51.0
88	43.0
87	36.0
86	30.0
Satisfactory	
85	25.0
84	20.0
83	15.0
82	10.0
81	5.0
80	0.0
79	0.0
78	0.0
77	0.0
76	0.0

Performance score	Percent of basic fee refunded
Marginal:	
75	5.0
74	10.0
73	15.0
72	20.0
71	25.0
70	30.0
69	35.0
68	40.0
67	45.0
66	50.0
Unsatisfactory:	
Below 65	50.0

Performance scores should be rounded to the nearest tenth of a point and the percent of award fee determined accordingly (e.g., a score of 88.4 equals 42.0% of award fee earned.)

III. Section-By-Section Analysis of the Revised Proposed Rule

Today's RPR would result in an amendment to DOE's Acquisition Regulations (DEAR). DEAR section 970.3102-21, Fines and Penalties, would be revised to reflect that, for profit making M&O contractors, fines, penalties and related costs incurred in the performance of the contract will generally be nonreimbursable when they result from contractor negligence or breach of a legal duty placed on the contractor by law or by contract. Any claim for reimbursement of fines and penalties assessed against the contractor for which the contractor seeks reimbursement should be presented to the Contracting Officer under the terms of the contract. In determining whether reimbursement is appropriate under the facts and circumstances presented, the Contracting Officer shall take into consideration such factors as whether the losses resulted from acts directed or

authorized by the Contracting Officer or resulted from the failure of DOE to provide necessary funds to avoid a noncomplaint situation. A profit making contractor which is not otherwise exempt by law or regulation will not be reimbursed for fines or penalties imposed by DOE under the Price-Anderson Amendments. All of the above nonreimbursable costs would be listed as unallowable costs under DEAR section 970.5204-13(e)(12) as well as section 970.5204-14(e)(10).

Also DEAR sections 970.5204-13(e)(17) and 970.5204-14(e)(15), losses, would be revised to disallow any costs that could have been avoided by the contractor or its subcontractors, and were incurred solely and exclusively as the result of negligence or willful misconduct on the part of any contractor or subcontractor employee at any level or third parties other than DOE. This is intended to include situations where the contractor or subcontractor has not performed with the skill and expertise for which DOE has bargained under the contract. Third party claims for damages alleging negligence on the part of the contractor or a subcontractor and litigation expenses would also be allowable under this section.

DEAR sections 970.5204-139(e)(36)(i) and 970.5204-14(e)(34)(i) would be revised to make clear that the cost of bonds and insurance will be considered unallowable when they are incurred to insure against losses resulting from avoidable costs that are otherwise unallowable under the contract. The purpose of the revisions would be to preclude the contractor from being indirectly reimbursed for unallowable costs that would not be directly reimbursable. An exception may be made for insurance or bond costs which are authorized by specific written direction of the Contracting Officer. DEAR 970.7011(c) would also be amended to reflect that policy, and a policy that any indemnification for nonnuclear risks will be limited to losses in excess of the liability cap discussed below.

DEAR section 970.5204-16 has been revised to provide that the new proposed paragraph (a) will be used instead of the current paragraph (a) when the award fee provisions are used. This new subsection provides that 50% of the new "Basic Fee" may be refunded to DOE for performance scores of 75 or below.

DEAR section 970.5204-18 provides a definition of nonprofit management and operating contractors. This is a new section.

The proposed regulation would hold the contractor liable for loss or

destruction of or damage to government property resulting solely and exclusively from any negligent act or omission or willful misconduct, including theft, of any kind on the part of any contractor or subcontractor employee at any level. New DEAR section 970.5204-21(j) would also hold the contractor liable for any such losses resulting from failure to exercise reasonable care to avoid the loss or damage. Scrap, waste and other routine costs which are reasonably anticipated would not constitute unallowable costs under this clause.

Contractors are entitled to an understanding of the limitations of the new exposure which they are expected to assume. Even though the potential risk of disallowed costs may be within the contractor's control, an indefinite or incalculable vulnerability to disallowed expenses would not permit contractors to compare their risks and rewards in determining whether to undertake an M&O contract. DEAR section 970.5204-55 would be added to provide a limitation on the exposure of the contractor for non-criminal fines, penalties, and other costs which might no longer be allowed costs under these new regulations. This ceiling would be equal to the sum of the actual award fee earned and the actual basic fee earned for the six-month evaluation period during the event(s) which caused the avoidable costs to occur but would not apply to any costs or liabilities incurred under other provisions of the contract. (In cost plus fixed fee contracts, the liability ceiling would be equal to the amount of 6 months of fixed fee for the period during which such costs are attributed or otherwise incurred.)

Since fees awarded during subsequent periods may be insufficient to assure DOE recovery for costs which are the contractor's responsibility, the Contracting Officer has the option of withholding a percentage of the award fee earned at the end of each evaluation period to protect DOE from a potential default on the part of the contractor for its avoidable cost obligation.

Alternatively, the contractor may satisfy its financial responsibility obligation by obtaining letters of credit, corporate guarantees, bonds, or make other similar financial arrangements. Liability for fines, penalties, unallowable avoidable costs and loss to government property incurred over multiple evaluation periods would be allocated to the evaluation period in which the incident or event giving rise to the cost occurred. If it is not reasonably possible to allocate these activities to a specific evaluation period, or if the incidents or events giving rise to the avoidable costs occurred over multiple evaluation

periods, the contractor's financial risk is limited to the sum of the actual award fee earned and the actual nonreimbursable costs or losses were determined. If such determination is made following the expiration of a contract, or the contractor is otherwise replaced, the sum of the actual award fee earned and the actual basic fee earned for the last six-month period that the contract was in effect shall be utilized, after deducting such disallowed costs as were previously charged to that period.

Today's RPR adds new DEAR section 970.5204-56, Determining Avoidable Costs, which provides for a one-year phase-in period for a new contractor inheriting employees as holdovers from the previous contractor. The new contractor would not be responsible for avoidable costs resulting from negligence of the holdover employees for a period to be negotiated with the Contracting Officer prior to entering into a contract. This phase-in period, however, may not exceed one year. This section also defines what avoidable costs are.

A new DEAR section 970.3102-22, Avoidable Costs, has been added to provide the contractor with examples of the factors he or she may consider in determining whether a cost is an avoidable cost, and thus unallowable.

In addition, DEAR section 970.5204-56 provides that the Contracting Officer, in determining whether a cost is an "Avoidable Cost," may among other factors, consider seven specified factors. This is designed to provide the Contracting Officer flexibility when unusual and unforeseen circumstances result in the incurrence of an avoidable cost that would otherwise be non-reimbursable.

The revised proposed rule would amend DEAR 970.5204-31 to indicate that if DOE does not choose to direct litigation between the contractor and a third party, DOE will not be responsible for the costs of litigation, unless the Contracting Officer, following the specified guidelines, determines the cost to be reimbursable. The contractor would be eligible to make a claim for the costs of litigation and resulting damages in such an event, once a final judgment has been rendered, and subject to the limitations imposed by the nonreimbursement provisions of the Major Fraud Act and the Price-Anderson Amendments. DOE will continue to reimburse all costs involved with litigation which is directed or controlled by the agency. DEAR 970.5204-13(e)(17)(iv) and 970.5204-

14(e)(15)(iv) would also be amended to reflect these changes.

A new section, DEAR 970.5204-58, would be added under today's revisions, which defines Avoidable Costs. These are unallowable costs which include losses due to contractor or subcontractor negligence or willful misconduct in performing ordinary day-to-day functions under the contract.

DOE recognizes that small and small disadvantaged businesses may be disproportionately impacted by the changes involved in the M&O contracting system as contemplated under the RPR. DEAR sections 970.5204-13(e)(36)(ii) and 970.5204-14(e)(34)(ii) are added to exempt small and small disadvantaged businesses from today's RPR in order to ensure participation of small and small disadvantaged businesses in the M&O contracting and subcontracting system.

It is contemplated that DOE and its M&O contractors will make every effort to resolve as soon as possible on an informal basis any disagreements which arise concerning particular costs which may be unallowable under these regulations. DOE recognizes that it will be in the best interest of cooperative contract administration and performance to encourage mutually satisfactory agreements with its contractors regarding cost allowability in a timely and informal manner.

The Construction Contracts Schedule, Construction Management Contract Schedule, and Special Equipment Purchases/Subcontract Work Schedule will be revised to reflect fee amounts, related fee percentages and incremental percentages which have been increased to accommodate the economic inflation since these schedules were last updated. DEAR 915.971-5 (d), (f) and (h).

Language will be added to DEAR 915.972(a) making it clear that all M&O contracts awarded on an award fee basis will use the techniques set forth in 970.1509-8 to convert from a CPFF to an award fee negotiation objective.

The Production Efforts Schedule and the Research and Development Efforts Schedule will amend DEAR 970.1509-5(b) to incorporate fee amounts, related fee percentages and incremental percentages which have been increased to accommodate economic inflation since these schedules were last updated.

DEAR 970.1509-8 will be amended to provide the details of the technique which will be used to convert a CPFF negotiation objective to an award fee negotiation objective. In essence, the table under subparagraph (d) will be deleted in favor of a new approach which provides mandatory basic fees plus award fees which vary in size

based upon the type of facility being managed and operated. Under this approach, contractors responsible for activities with greater risk, particularly the kinds of risks detailed in the Accountability NOPR, will be eligible for higher award fees.

In addition, this section will include a new listing of adjective ratings which will be used in performance evaluations under M&O award fee contracts. Each adjective will be defined in narrative fashion, in terms of performance scores, and in terms of the percentage of available award fee earned. This list of standard, mandatory adjectives will ensure that contractors rated at the same level of performance will receive identical adjective ratings. Furthermore, a mandatory fee conversion table will be incorporated, which will ensure that a specific performance rating will result in the award of a particular percentage of the available award fee for the evaluation period involved. These revisions are intended to provide a more uniform approach to award fee contracting throughout the DOE.

IV. Procedural Requirements

A. Review Under Executive Order 12291

Executive Order 12291 requires that a regulatory impact analysis be prepared prior to the promulgation of a "major rule." DOE has concluded that this action is not a major rule because its promulgation will not result in: (1) An annual effect on the economy of \$100 million or more; (2) a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; (3) significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States based enterprises to compete in domestic or export markets. Pursuant to OMB Bulletin 85-7, dated December 14, 1984, procurement regulations, other than those specifically named, are not subject to OMB regulatory review. DOE has determined that this proposal is not subject to OMB's regulatory review.

B. Review Under the Regulatory Flexibility Act

This proposed rule was reviewed under the Regulatory Flexibility Act of 1980, Public Law 96-354, which requires preparation of a regulatory flexibility analysis for any rule which is likely to have significant economic impact on a substantial number of small entities. DOE certifies that this rule will not have a significant economic impact on a substantial number of small entities and,

therefore, no regulatory flexibility analysis has been prepared.

C. Review Under the Paperwork Reduction Act

No new information collection or recordkeeping requirements are imposed by this proposed rulemaking. Accordingly, no OMB clearance is required by the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*).

D. Review Under the National Environmental Policy Act

DOE has concluded that promulgation of this rule would not represent a major Federal action having significant impact on the human environment under the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. *et seq.* (1976)), or the Council on Environmental Quality Regulations (40 CFR parts 1500-1508) and the DOE Guidelines (10 CFR part 1021), and, therefore, does not require an environmental impact statement or an environmental assessment pursuant to NEPA.

E. Review Under Executive Order 12612

Executive Order 12612, 52 FR 41285 (October 30, 1987) requires that regulations, rules, legislation, and any other policy actions be reviewed for any substantial direct effects on States, on the relationship between the national government and the States, or in the distribution of power and responsibilities among various levels of government. If there are sufficient substantial direct effects, then the Executive Order requires preparation of a federalism assessment to be used in all decisions involved in promulgating and implementing a policy action.

Today's proposed rule, when finalized, will revise certain policy and procedural requirements. However, DOE has determined that none of the revisions will have a substantial direct effect on the institutional interests or traditional functions of States.

V. Public Comments

Interested persons are invited to participate by submitting data, views, or arguments with respect to the proposed DEAR amendments set forth in this notice. Written comments should be submitted to the address indicated in the "ADDRESSES" section of this notice. All comments received will be available for public inspection in the DOE Reading Room, Room 1E-190, Forrestal Building, 1000 Independence Avenue SW., Washington, DC 20585, between the hours of 8 a.m. and 4 p.m., Monday through Friday, except Federal holidays. All written comments received by (the

date indicated in the "DATES" section of this notice) will be carefully assessed and fully considered prior to publication of the proposed amendment as a final rule. Any person submitting information which that person believes to be confidential and which may be exempt by law from public disclosure should submit one complete copy, as well as ten (10) copies from which the information claimed to be confidential has been deleted. DOE reserves the right to determine the confidential status of the information or data and to treat it according to its determination. DOE's generally applicable procedures for handling information, which has been submitted in a document and may be exempt from public disclosure, are set forth in 10 CFR 1004.11.

VI. Public Hearing

DOE will hold a public hearing on the proposed regulatory amendments set forth on August 28, 1990, at the location specified earlier in the "ADDRESSES" section of this notice.

Any person who has an interest in the proposed regulatory amendments or who is a representative of a group or class of persons which has an interest in these amendments may make a request for an opportunity to make an oral presentation. Such a request to speak at the hearing should be directed to the address specified in the "ADDRESSES" section of this notice, and must be received by 4:30 p.m., local time, on the date specified in the "DATES" section.

The person making the request should describe briefly his or her interest in the proceeding. The person should also provide a telephone number where the person may be reached. Those persons requesting an opportunity to make an oral presentation should bring ten (10) copies of their statement to the hearing.

DOE reserves the right to select the persons to be heard at the hearing, to schedule the respective presentations, and to establish the procedures governing the conduct of the hearing. In that regard, written statements of any length should be submitted 24 hours prior to the hearing. However, the length of each oral presentation summarizing that written statement is limited to 10 minutes.

The General Counsel and the Director of the Office of Procurement and Assistance Management will preside at the hearing. The hearing will not be a judicial or an evidentiary-type hearing, but will be conducted as a legislative-type hearing in accordance with 5 U.S.C. 553. The presiding DOE officials will provide any additional procedures which may be necessary for the conduct of the hearing.

Any person who makes an oral presentation at the public hearing may address subjects and issues that the person deems to be relevant and should be prepared to respond to questions from the panel.

A transcript of the public hearing will be made and the entire record of the hearing, including the transcript, will be retained by DOE and made available at the DOE Freedom of Information Reading Room, Room 1E-190, Forrestal Building, 1000 Independence Avenue SW., Washington, DC 20585, between the hours of 8:30 a.m. and 4:00 p.m., Monday through Friday. For information concerning the availability of the record at the DOE Freedom of Information Reading Room, call (202) 586-6020. In addition, any person may purchase a copy of the hearing transcript from the reporter.

List of Subjects in 48 CFR Parts 915, 950 and 970

Government contracts, Government procurement, Management and operating contracts.

Issued in Washington, DC on August 3, 1990.

Silas B. Fisher,

Director, Office of Procurement and Assistance Management.

PART 970—DOE MANAGEMENT AND OPERATING CONTRACTS

1. The authority citation for part 970 continues to read as follows:

Authority: Sec. 161 of the Atomic Energy Act of 1954 (42 U.S.C. 2201), Sec. 644 of the Department of Energy Organization Act, Pub. L. 95-91 (42 U.S.C. 7254), Sec. 201 of the Federal Civilian Employee and Contractor Travel Expenses Act of 1985 (41 U.S.C. 420) and Sec. 1534 of the Department of Defense Authorization Act, 1986, Pub. L. 99-145 (42 U.S.C. 7256a), as amended.

2. Section 970.3102-21, Fines and Penalties, is revised as follows:

970.3102-21 Fines and penalties.

(a) It is DOE policy to reimburse nonprofit management and operating contractors for fines and penalties that are incurred in the performance of their contracts. Any such reimbursement for fines and penalties incurred under the contract will be made as long as such fines and penalties are not the result of the willful misconduct or lack of good faith on the part of the contractor's officers, directors or supervising representatives.

(b)(1) It is DOE policy not to reimburse profit making management and operating contractors for fines and penalties that are incurred as a result of contractor negligence or misconduct where the breach of the contractor's

legal duty giving rise to such a fine or penalty involves an area of responsibility clearly placed on the contractor.

(2) For purposes of this section the phrase "fines and penalties" means a sum of money the payment of which Federal or state law exacts as punishment for doing some act which is prohibited or not doing some act which is required. The assessment is imposed by statute or regulation as a consequence of the commission of an offense or act of omission, and the payment is intended as a punishment. The fine or penalty may be imposed in a civil enforcement action or result from a criminal conviction. A fine or penalty shall not be construed as an assessment which is imposed as damages on the basis of civil litigation or which is imposed on the basis of strict liability; that is, without regard to the fault or negligence of the party involved.

(3) In assessing any claim for payment by the contractor for a fine or penalty as an allowable cost under the contract the Contracting Officer may, among other factors, consider the following:

(i) Whether the contractor's conduct resulted from compliance with written direction from the Contracting Officer.

(ii) Whether the contractor's conduct occurred after specific instances of noncompliance were reported by the contractor to the Contracting Officer and necessary funding to correct the conditions were not made available on a timely basis.

(iii) Whether the act which resulted in the fine or penalty was a result of common law negligence or wrongdoing on the part of the contractor and/or other third parties, other than DOE.

(iv) Whether the act or failure to act resulted from a violation of specific written Contracting Officer orders or a violation of formal DOE regulations or orders.

(v) Whether the contractor voluntarily informed the Contracting Officer in a timely, good faith manner of the condition or activity which later resulted in the imposition of the fine or penalty. The period of time that the contractor was aware or should have been aware of the problem prior to reporting will also be pertinent.

(vi) Whether the contractor was newly selected to manage the facility and whether it had sufficient time to discern the problem and report it prior to the imposition of the fine or penalty.

(vii) Whether the assessment of the fine or penalty was due solely to the contractor's common law negligence or wrongdoing or whether DOE contributed to the contractor's action or inaction.

These are only some of the factors to be considered and do not represent all facts which may be pertinent in every case. Criminal fines and penalties which represent the judicial determination beyond a reasonable doubt that the contractor acted wrongfully are generally not considered to be an allowable cost and will not be considered by the Contracting Officer for reimbursement except under extraordinary circumstances. Any final decision to reimburse a criminal fine or penalty shall be made by the Procurement Executive and shall only be made with the concurrence of the General Counsel.

(c) It is DOE's policy not to reimburse any profit making contractor for civil or criminal penalties assessed under the Price-Anderson Amendments Act of 1988, Pub. L. No. 100-408, 42 U.S.C. 2273, 2282, or for costs of litigation resulting from such assessments, except as may be specifically provided in regulations implementing those civil and criminal penalties provisions.

(d) For purposes of this section, a nonprofit contractor or subcontractor is one which receives no fee and is considered nonprofit under the laws of the jurisdiction where it is incorporated. A subsidiary may be a nonprofit contractor or subcontractor if all entities above it in the corporate structure are considered nonprofit under the laws of the incorporating jurisdiction. A Contracting Officer may also treat as nonprofit a contractor which receives no fee and whose particular corporate organization or circumstances, in the judgment of the Contracting Officer, warrants such consideration. All other management and operating contractors are considered profit making, *provided, however*, that the M&O contractors for the Sandia National Laboratories, Bettis Atomic Power Laboratory and Knolls Atomic Power Laboratory will be treated as nonprofits for the purpose of determining whether the avoidable cost liabilities provisions of the DEAR are applicable.

3. Section 970.3102-22, Avoidable Costs is added to read as follows:

970.3102-22 Avoidable costs.

In determining whether a cost is an "Avoidable Cost" the Contracting Officer, may, among other factors, consider:

(a) Whether the contractor's conduct resulted from compliance with written direction from the Contracting Officer.

(b) Whether the contractors conduct occurred after specific instances of noncompliance were reported by the contractor to the Contracting Officer and necessary funding or authorization

to correct the conditions were unavailable.

(c) Whether the act or failure to act resulted from a violation of specific written Contracting Officer orders or a violation of formal DOE regulations or orders.

(d) Whether the contractor voluntarily informed the Contracting Officer in a timely good faith manner of the condition or activity which later resulted in the incurrence of avoidable costs. The period of time that the contractor was aware or should have been aware of the problem prior to reporting it is also pertinent.

(e) Whether the contractor was newly selected to manage the facility and whether it had sufficient time to discern the problem and report it prior to the incurrence of avoidable costs.

4. Section 970.5204-18, Definition of Nonprofit and Profit Making Management and Operating Contractors, is added as follows:

970.5204-18 Definition of Nonprofit and Profit Making Management and Operating Contractors

For purposes of subsections 970.5204-13(e)(12) and (e)(17), 970.5204-14(e)(10) and (e)(15), and 970.5204-21(j), a nonprofit management and operating contractor is one which receives no fee and is considered nonprofit under the laws of the jurisdiction where it is incorporated. A subsidiary may be a nonprofit contractor if all entities above it in the corporate structure are considered nonprofit under the laws of the incorporating jurisdiction. A Contracting Officer may also treat as nonprofit a contractor which receives no fee and whose particular corporation organization or circumstances, in the judgment of the Contracting Officer, warrants such consideration. All other management and operating contractors are considered profit making, *provided, however*, that the contractors for the Sandia National Laboratories, Bettis Atomic Power Laboratory and Knolls Atomic Laboratory will be treated as nonprofits for the purpose of determining whether the avoidable cost liabilities provisions of the DEAR are applicable.

5. Section 970.5204-13(e), Items of unallowable costs, is amended by revising paragraph (e)(12), and by adding paragraphs (e)(17)(iv) and (e)(36) as follows:

970.5204-13 Allowable costs and fixed-fee (Management and Operating contracts)

(e) *Items of unallowable costs.* The following items of costs are unallowable under this contract to the extent indicated:

(12) *Fines and penalties.*

(Note 1) In contracts with nonprofit contractors, use the following clause:

Fines and penalties, including assessed interest, resulting from violations of, or failure of the contractor to comply with, Federal, state, local or foreign laws and regulations, except when incurred as a result of compliance with the scope of work, specific terms and conditions, or other provisions of the contract or written instructions from the contracting officer authorizing in advance such payments. Civil or criminal penalties assessed under the Price-Anderson Amendments Act of 1988, 42 U.S.C. 2273, 2282, or costs of litigation resulting from such assessments, are unallowable except as may be specifically provided in regulations implementing those civil and criminal penalty provisions.

(Note 2) In contracts with profit making contractors, use the following clause:

Fines and penalties, as set forth at DEAR 970.3102-21(b), including assessed interest and litigation expenses, that are incurred as a result of contractor negligence or misconduct where the breach of the contractor's legal duty giving rise to such fine or penalty involves an area of responsibility clearly placed on the contractor. Civil or criminal penalties assessed under the Price-Anderson Amendments Act of 1988, 42 U.S.C. 2273, 2282, or costs of litigation resulting from such assessments are unallowable except as may be specifically provided in regulations implementing those civil or criminal penalty provisions.

(17) * * *

(i) * * *

(ii) * * *

(iii) * * *

(iv) (Note 3) In contracts with profit making contractors, add the following paragraph:

or, are direct costs which are avoidable that are incurred by the contractor, without any fault of DOE, exclusively as a result of the negligence or willful misconduct on the part of any of the contractor's or its subcontractor's personnel at any level in performing work under the contract or the negligence or willful misconduct of other third parties other than DOE. Such direct costs may include, for example, additional programmatic expenses for research and development or production activities, and third party claims against the contractor, but shall not include consequential damages.

Litigation expenses incurred by the contractor in bringing or defending claims relating to these costs are also unallowable.

(36)(i) Notwithstanding any other provision of this contract, the costs of bonds and insurance are unallowable to the extent they are incurred to protect and indemnify the contractor against otherwise unallowable avoidable costs, such as fines and penalties, third party claims, negligently or willfully

caused damage to or loss of government property and theft or unauthorized use of government property, except and only to the extent that such insurance or bond is required by the specific written direction of the Contracting Officer.

(ii) Consistent with the clause of this contract entitled "Small Business and Small Disadvantaged Business Subcontracting Plan" the unallowable costs provisions of subparagraph (e)(17)(iv) dealing with avoidable costs and subparagraph (i) of this clause, the profit making provisions of the clauses set forth at 970.5204-13(e)(12) and 970.5204-14(e)(10) and the clause set forth at 970.5204-21(j) are not applicable to small and small disadvantaged businesses as defined in the clause of this contract entitled "Utilization of Small Business Concerns and Small Disadvantaged Business Concerns."

6. Section 970.5204-14(e), Items of unallowable costs, is amended by revising paragraph (e)(10) and by adding paragraphs (e)(15)(iv), and (e)(34) as follows:

(e) Items of unallowable costs. The following examples of items of costs are unallowable under this contract to the extent indicated:

(10) Fines and penalties.

(Note 1) In contracts with nonprofit contractors, use the following clause:

Fines and penalties, including assessed interest, resulting from violations of, or failure of the contractor to comply with Federal, state, local or foreign laws and regulations, except when incurred as a result of compliance with the scope of work, specific terms and conditions, or other provisions of the contract or written instructions from the contracting officer authorizing in advance such payments. Civil or criminal penalties assessed under the Price-Anderson Amendments Act of 1988, 42 U.S.C. 2273, 2282, or costs of litigation resulting from such assessments, are unallowable except as may be specifically provided in regulations implementing those civil and criminal penalty provisions.

(Note 2) In contracts with profit making contractors, use the following clause:

Fines and penalties, as set forth at DEAR 970.3102-21(b), including assessed interest and litigation expenses, that are incurred as a result of contractor negligence or misconduct where the breach of the contractor's legal duty giving rise to such fine or penalty involves an area of responsibility clearly placed on the contractor. Civil or criminal penalties assessed under the Price-Anderson Amendments Act of 1988, 42 U.S.C. 2273, 2282, or costs of litigation resulting from such assessments are unallowable except as may be specifically provided in regulations implementing those civil or criminal penalty provisions.

(15) * * *

(iv) (Note 3) In contracts with profit making contractors, add the following provision:

or, are direct costs which are avoidable that are incurred by the contractor, without any

fault of DOE, exclusively as a result of the negligence or willful misconduct on the part of any of the contractor's or its subcontractor's personnel, at any level, in performing work under the contract or the negligence or willful misconduct of other third parties other than DOE. Such direct costs may include, for example, additional programmatic expenses for research and development or production activities, and third party claims against the contractor, but shall not include consequential damages.

Litigation expenses incurred by the contractor in bringing or defending claims relating to these costs are also unallowable.

(34)(i) Notwithstanding any other provision of this contract, the costs of bonds and insurance are unallowable to the extent they are incurred to protect and indemnify the contractor against otherwise unallowable avoidable costs, such as fines and penalties, third party claims, negligently or willfully caused damage to, or loss of government property and theft or unauthorized use of government property, except and only to the extent such insurance or bond is required by the specific written direction of the Contracting Officer.

(ii) Consistent with the clause of this contract entitled "Small Business and Small Disadvantaged Business Subcontracting Plan" the unallowable costs provisions of subparagraph (e)(17)(iv) dealing with avoidable costs and subparagraph (i) of this clause, the profit making provision of the clauses set forth at 970.5204-13(e)(12) and (14)(e)(10) and the clause set forth at 970.5204-21(j) are not applicable to small and small disadvantaged businesses as defined in the clause of this contract entitled "Utilization of Small Business Concerns and Small Disadvantaged Business Concerns."

7. Section 970.5204-21, Property, is amended by adding after paragraph (i) the following paragraph (j):

970.5204-21 Property.

(j) Additional responsibility for risk of loss of government property.

The following paragraph (j) shall be added in contracts with profit making contractors:

Notwithstanding the limitation of liability described in paragraph (f) above, the contractor will also be liable for direct costs and expenses resulting from damage to Government property as a direct result of ordinary contractor or subcontractor negligence where the costs which are to be borne by the contractor are those incurred in effecting the repairs to, or replacement of, Government property. These avoidable costs do not include scrap, waste and other routine damages or losses which occur as part of the cost of doing business and are reasonably anticipated. Costs which shall not be reimbursable are the result of circumstances: (1) clearly within the contractor's sole and exclusive control and (2) resulting from the acts or omissions of the contractor or third parties other than DOE, in which the exercise of reasonable care would have avoided the loss or damage. In the event that such direct costs and expenses resulting from damage to

Government property are also partially caused by the contributing fault of third parties, other than DOE, such costs and expenses will not be reimbursed by DOE. The allocation of financial responsibility between the contractor and such third party should be determined by the parties involved.

In addition, the contractor shall be liable for direct damage to, or loss of, Government property stemming from theft, embezzlement, unauthorized use, or any other ultra vires activity by any contractor or subcontractor personnel at any level. The contractor would be required to bear the cost of repairing or replacing the damaged or lost government property.

For purposes of this clause, negligence is common law negligence. The standard of care to be applied is that which a reasonably prudent person would exercise in a technically complex, high risk environment.

8. Section 970.5204-31, Litigation and Claims, is revised to read as follows:

970.5204-31 Litigation and Claims

(a) Initiation of litigation. The contractor may, with the prior written authorization of the Contracting Officer, and shall, upon the request of the Government, initiate litigation against third parties, including proceedings before administrative agencies, in connection with this contract. The contractor shall proceed with such litigation in good faith and as directed from time to time by the Contracting Officer. The costs of such litigation shall be at the expense of the Government.

(b) Defense and Settlement of Claims.

(1) The contractor shall give the Contracting Officer immediate notice in writing of any action, including any proceeding before an administrative agency, filed against the contractor arising out of the performance of this contract, and of any claim against the contractor, the costs and expense of which the contractor would propose to submit as a claim for allowable costs under the terms of the clause entitled "Allowable Costs and Fixed-Fee."

(2) Except to the extent prohibited by the Major Fraud Act of 1988, 41 U.S.C. 256, the Contracting Officer may choose to instruct the contractor to proceed with the defense of the claim at the direction of the Government. Except as otherwise directed by the Contracting Office in writing, the contractor shall furnish immediately to the Contracting Officer copies of all pertinent papers received by the contractor with respect to such action or claim. The contractor may, with the Contracting Officer's approval, settle any such action or claim. The contractor shall effect, at the Contracting Officer's request, an assignment and subrogation in favor of the Government of all of the contractor's rights and claims (except those against

the Government) arising out of such action or claim against the contractor, and, if required by the Contracting Officer, shall authorize representatives of the Government to settle or defend any such action or claim and to represent the contractor in, or to take charge of, any action. If the settlement or defense of an action or claim against the contractor is undertaken by the Government, the contractor shall furnish all reasonable assistance in effecting a settlement or asserting a defense. The contractor shall, with the approval of the Contracting Officer, proceed with the defense of the action in good faith. If an adverse judgment is entered against the contractor, the defense of the action, and liability for any resulting claim or damages, shall be at the expense of the Government, provided, however, that the Government shall not be liable for such expenses to the extent that it would have been compensated for by insurance which was required by law or by the written direction of the Contracting Officer, but which the contractor failed to secure or maintain through its own fault or negligence.

(3) Should the Contracting Officer not choose to direct or approve the litigation, the Government has no liability for the costs of litigation. The contractor may request that the Contracting Officer assume direction of the litigation at any point when new facts on the matter would so warrant; provided, however, That the Contracting Officer may assume direction of the litigation or settlement, without a request from the contractor, at any time during the litigation process when the Contracting Officer determines that it is in the best interest of the Government to do so.

(4) The contractor must inform the Contracting Officer of any proposed settlement agreement. The notification shall be supported by all information available to the contractor which is pertinent to the settlement.

(i) Except to the extent prohibited by the Major Fraud Act of 1988, 41 U.S.C. 256, the Contracting Officer has the option at this point of accepting the settlement reached by the contractor. If the settlement is accepted, the Contracting Officer and the contractor shall negotiate the government's share of the settlement and litigation expenses. Any agreement reached at this point shall be under the authority, and subject to the restrictions, of FAR 33.210.

(ii) If the contractor proceeds without, or does not obtain, Contracting Officer approval of the settlement agreement, the amount of the agreement and all

related expense shall be at the contractor's own risk and expense.

(5) If the contractor has obtained a final judgment, a claim for reimbursement of litigation expenses or any resulting damages or both may be made to the Contracting Officer. Except to the extent prohibited by the Major Fraud Act of 1988, 41 U.S.C. 256, the Contracting Officer is authorized to negotiate a settlement with the contractor.

(i) *Certification of costs.* The Contracting Officer may not accept any settlement nor is he authorized to direct litigation where the contractor has not certified, in the form required by the clause of this contract entitled "Disputes," the facts known by the contractor, at the time the matter is submitted for review, which form the basis upon which the contractor seeks reimbursement of these costs.

(ii) Reimbursement of costs of litigation and judgments under this clause may be paid by the Government notwithstanding the prohibitions contained in DEAR subsections 970.5204-13(e)(12) and (17)(iv), DEAR subsections 970.5204-14(e)(10) and (15)(iv) and DEAR section 970.5204-21(j).

9. Section 970.5204-55, Ceiling on Certain Liabilities for Profit Making Contractors, is added as follows:

970.5204-55 Ceiling on certain liabilities for profit making contractors.

(a) The contractor's potential financial obligations under the unallowable avoidable cost provisions contained in 970.5204-13(e)(12) and (e)(17)(iv), 970.5204-14 (e)(10) and (e)(15)(iv) and 970.5204-21(j), including (1) noncriminal fines and penalties, (2) losses which are avoidable losses or other third party claims including the costs of defense of such litigation, (3) additional programmatic expenses which are avoidable costs, and (4) the costs of contractor responsibility for lost or damaged Government property, shall be limited to the amount of the actual award fee earned and the actual basic fee earned (or the amount of 6-months of fixed fee in the case of cost-plus-fixed fee contracts) in the evaluation period when the event or events which led to the imposition of the incurrence of costs or liabilities or the imposition of fines and penalties incurred. This limitation does not apply to any other categories of unallowable costs. In the case of continuing activities of the contractor which occur over a number of evaluation periods and result in costs or liabilities described above, the potential financial obligation of the contractor shall be limited to the amount of the actual award fee earned and the actual

basic fee earned in the single evaluation period when the incident(s) or event(s) giving rise to the contractor's disallowed cost or expense took place. If it is not possible to relate or reasonably allocate particular activities to individual evaluation periods, the financial obligation of the contractor shall be limited to the amount of the actual award fee earned and actual basic fee earned in the evaluation period when the amount of such nonreimbursable costs or liabilities were finally determined. If the determination as to which award fee period(s) the incident or activity occurred resulting in the unallowable avoidable costs is made following the expiration of the contract, or the contractor is otherwise replaced, the actual award fee earned and the actual basic fee earned for the last evaluation period that the contract was in effect shall be utilized, after deducting disallowed costs that were previously charged to the contractor during that period.

(b) The contractor shall be responsible for all costs and liabilities described in paragraph (a) of this section, up to the amount of the actual award fee earned and the actual basic fee earned in the pertinent evaluation period. The contractor agrees to provide, in such form and amount as shall be satisfactory to the Contracting Officer, a financial guarantee to assure that the contractor will have sufficient resources to satisfy all costs and liabilities up to the amount of the actual award fee earned and the actual basic fee earned for a period based upon the highest amount of fee received over the last four evaluation periods. With respect to new contracts or contracts that have been in effect for less than two years (or four six-month evaluation periods), the guarantee shall be in an amount that the Contracting Officer determines to be in the best interest of the Government, but not to exceed the amount of award fee available for the upcoming evaluation period. Alternatively, at the election of the contractor, at the end of each evaluation period the Contracting Officer may retain a percentage of the award fee as determined to be sufficient by the Contracting Officer to protect the interest of the Government. The financial responsibility of the contractor and the guarantee or retainage shall remain in effect for up to one year after the termination or expiration of the contract. Any costs or liabilities to third parties beyond the limitations described above would be reimbursed subject to the other provisions of the contract governing cost reimbursement. The contractor's potential financial risk

under the Major Fraud Act of 1988, 41 U.S.C. 256, or the civil or criminal penalties provisions of the Price-Anderson Amendments Act of 1988, 42 U.S.C. 2273, 2282, will not be limited except as provided in regulations implementing those provisions.

10. Section 970.5204-56, Determining Avoidable Costs, is added as follows:

970.5204-56 Determining avoidable costs.

(a)(1) Avoidable Costs are those costs which are incurred as the result of ordinary negligence or willful misconduct by the contractor or its subcontractors or other third parties, other than DOE, in carrying out the terms and conditions of the contract when:

(i) The work is clearly within the sole and exclusive control of the contractor or subcontractor; and

(ii) The increased costs or expenses result from the actions or inactions of the contractor or subcontractor; and

(iii) DOE is not responsible in any way for the act or omission which resulted in the additional costs.

(2) The cost and expenses of litigation, settlements, and related litigation costs (including attorneys fees), fines, penalties, judgments and liabilities resulting from administrative findings, and damage to, or loss of, Government property when carrying out well understood non-experimental work and damage to, or loss of, Government property as the result of theft, embezzlement or other unauthorized use are unallowable Avoidable Costs to the extent that the acts or omissions resulting in these costs are Avoidable Costs as defined in paragraph (a)(1) of this section. Such costs are unallowable except as specifically authorized by the Contracting Officer and within the scope of work in the contract.

(b) Negligence, for purposes of this section, is common law negligence. The standard of care to be applied is that which a reasonably prudent man would exercise in a technically complex, high risk environment.

(c) Avoidable Costs shall not include the cost of losses or damages incurred by the contractor as a result of the acts or omissions of employees who, during the phase-in period of a new contract, the contractor is required to employ as a result of assuming the management of a DOE facility. The length of this phase-in period shall be _____ months. It shall in no event, however, exceed twelve months. The contractor is always responsible for the acts or omissions of any employee hired directly by the contractor.

PART 950—EXTRAORDINARY CONTRACTOR ACTIONS

11. The authority citation for part 950 continues to read:

Authority: 42 U.S.C. 7254; 40 U.S.C. 486(c).

11a. Section 950.7011(c) is revised to read as follows:

950.7011 General contract authority indemnity.

(c)(1) While it is normally DOE policy to require its non M&O contractors to obtain insurance coverage against public liability for nonnuclear risks, there may be circumstances in which a contractual indemnity may be warranted to protect a DOE non M&O contractor against liability for uninsured nonnuclear risks.

(2) It is DOE policy that, except to the extent required by the direction of the Contracting Officer and in the case of small and small disadvantaged businesses, M&O contractors shall not obtain reimbursement for bonds or insurance to cover otherwise unallowable costs. M&O contractors may only be indemnified for nonnuclear risk to the extent that the contractor's potential financial losses should exceed the amount of the liability cap as provided in DEAR 970.5204-55, subject to the approval of the Contracting Officer.

PART 915—CONTRACTING BY NEGOTIATION

12. The authority citation for part 915 continues to read as follows:

Authority: 42 U.S.C. 7254; 40 U.S.C. 486(c).

12a. Section 915.971-5 is proposed to be amended by revising paragraphs (d), (f), and (h) to read as follows:

915.971 Fee schedules

(d) The following schedule sets forth the base for construction contracts:

CONSTRUCTION CONTRACTS SCHEDULE

Fee base (dollars)	Fee (dollars)	Fee (%)	Incr %
100,000	5,400	5.40	5.30
300,000	16,000	5.33	5.00
500,000	26,000	5.20	4.80
1,000,000	50,000	5.00	3.55
3,000,000	121,000	4.03	3.00
5,000,000	181,000	3.62	2.62
10,000,000	312,000	3.12	2.38
15,000,000	431,000	2.87	2.01
25,000,000	632,000	2.53	1.79
40,000,000	900,000	2.25	1.58
60,000,000	1,216,000	2.03	1.43
80,000,000	1,502,000	1.88	1.29
100,000,000	1,759,000	1.76	1.15
150,000,000	2,333,000	1.56	0.99

CONSTRUCTION CONTRACTS SCHEDULE—Continued

Fee base (dollars)	Fee (dollars)	Fee (%)	Incr %
200,000,000	2,829,000	1.41	0.73
300,000,000	3,563,000	1.19	0.63
400,000,000	4,188,000	1.05	0.52
500,000,000	4,706,000	0.94	
Over 500 million	4,706,000		*0.52

* 0.52% excess over \$500 million.

(f) The following schedule sets forth the base for construction management contracts:

CONSTRUCTION MANAGEMENT CONTRACTS SCHEDULE

Fee base (dollars)	Fee (dollars)	Fee (%)	Incr %
100,000	5,400	5.40	5.30
300,000	16,000	5.33	5.00
500,000	26,000	5.20	4.80
1,000,000	50,000	5.00	3.55
3,000,000	121,000	4.03	3.00
5,000,000	181,000	3.62	2.62
10,000,000	312,000	3.12	2.38
15,000,000	431,000	2.87	2.01
25,000,000	632,000	2.53	1.79
40,000,000	900,000	2.25	1.58
60,000,000	1,216,000	2.03	1.43
80,000,000	1,502,000	1.88	1.29
100,000,000	1,759,000	1.76	
Over 100 million	1,759,000		*1.29

* 1.29% excess over \$100 million.

(h) The schedule of fees for consideration of special equipment purchases and for consideration of the subcontract program under a construction management contract is as follows:

Special Equipment Purchases/Subcontract Work Schedule

Fee base (dollars)	Fee (dollars)	Fee (%)	Incr (%)
100,000	1,500	1.50	1.50
200,000	3,000	1.50	1.50
400,000	6,000	1.50	1.50
600,000	9,000	1.50	1.50
800,000	12,000	1.50	1.00
1,000,000	14,000	1.40	1.10
2,000,000	25,000	1.25	0.85
4,000,000	42,000	1.05	0.70
6,000,000	56,000	0.93	0.65
8,000,000	69,000	0.86	0.60
10,000,000	81,000	0.81	0.56
15,000,000	109,000	0.73	0.48
25,000,000	157,000	0.63	0.43
40,000,000	222,000	0.56	0.40
60,000,000	301,000	0.50	0.36
80,000,000	372,000	0.47	0.34
100,000,000	439,000	0.44	0.25
150,000,000	566,000	0.38	0.21
200,000,000	670,000	0.34	0.12
300,000,000	793,000	0.26	
Over 300 million	793,000		*0.12

*0.12% excess over \$300 million.

13. The introductory text to section 915.972(a) is proposed to be revised to read as follows:

915.972 Special considerations for cost-plus-award-fee contracts.

(a) When a contract is to be awarded on a cost-plus-award-fee basis in accordance with 916.404-2, several special considerations are appropriate. Fee objectives for management and operating contracts, even those using the Construction or Construction Management fee schedules from Section 915.971-5, shall be developed pursuant to the procedures set forth in section 970.1509-8. Fee objectives for other cost-plus-award-fee contracts shall be developed as follows:

PART 970—DOE MANAGEMENT AND OPERATING CONTRACTS

[Note: In the final rule, all amendments will be set out sequentially by part and section number.]

14. Section 970.1509-5(b) is proposed to be revised to read as follows:

970.1509 Limitations.

(b) The applicable schedules and maximum fees are:

PRODUCTION EFFORTS

Fee base (dollars)	Fee (dollars)	Fee (%)	Incr (%)
Up to \$1 mil			7.00
1,000,000	70,000	7.00	6.20
3,000,000	194,000	6.47	5.55
5,000,000	305,000	6.10	4.48
10,000,000	529,000	5.29	3.88
15,000,000	723,000	4.82	3.39
25,000,000	1,062,000	4.25	3.06
40,000,000	1,521,000	3.80	2.67
60,000,000	2,054,000	3.42	2.35
80,000,000	2,524,000	3.16	2.14
100,000,000	2,952,000	2.95	1.32
150,000,000	3,613,000	2.41	1.02
200,000,000	4,123,000	2.06	0.56
300,000,000	4,678,000	1.56	0.48
400,000,000	5,162,000	1.29	0.41
500,000,000	5,574,000	1.11	
Over 500 million	5,574,000		*0.41

*0.41% excess over \$500 million.

RESEARCH AND DEVELOPMENT EFFORTS

Fee base (dollars)	Fee (dollars)	Fee (%)	Incr (%)
25,000	2,500	10.00	10.00
50,000	5,000	10.00	10.00
100,000	10,000	10.00	8.00
200,000	18,000	9.00	8.00
400,000	34,000	8.50	7.50
600,000	49,000	8.17	7.00
800,000	63,000	7.88	7.00
1,000,000	77,000	7.70	6.40
3,000,000	205,000	6.83	6.25

RESEARCH AND DEVELOPMENT EFFORTS—Continued

Fee base (dollars)	Fee (dollars)	Fee (%)	Incr (%)
5,000,000	330,000	6.60	5.68
10,000,000	614,000	6.14	5.22
15,000,000	875,000	5.83	4.43
25,000,000	1,318,000	5.27	3.86
40,000,000	1,897,000	4.74	3.38
60,000,000	2,572,000	4.29	2.99
80,000,000	3,170,000	3.96	2.46
100,000,000	3,662,000	3.66	1.54
150,000,000	4,434,000	2.96	1.04
200,000,000	4,955,000	2.48	0.61
300,000,000	5,561,000	1.85	0.53
400,000,000	6,095,000	1.52	0.46
500,000,000	6,556,000	1.31	
Over 500 million	6,556,000		*0.46

*0.46% excess over \$500 million.

15. Section 970.1509-8 (b), (c), and (d) are proposed to be revised to read as follows:

970.1509-8 Special considerations—award fee.

(b) In management and operating contracts, the basic fee portion of the fee negotiation objective shall be established equal to the otherwise applicable fixed fee established in accordance with 970.1509-4. This basic fee includes a 50% base fee and a 50% "at risk fee." No variations from this objective are authorized without the prior approval of the Procurement Objective. The basic fee shall be paid in equal installments on a monthly basis, in accordance with the clause at 970.5204-16, Payments and Advances. However, in the event the contractor's performance is judged by the Fee Determination Official to fall into the performance categories of Marginal or Unsatisfactory, as those terms are defined in paragraph (d) of this section, the contractor shall be required to refund the Government 5% of the at risk portion (50%) of the basic fee paid for the evaluation period for each performance point below 76, as shown in the table in paragraph (d) of this section.

(c) The award fee portion of the fee objective for a management and operating contract shall be established for each contract using the following formula:

Basic Fee Amount X (multiplied by the) Applicable Award Fee Factor. The applicable award fee factor shall be according to the following category placements as set forth below:

Defense Facility—A
Defense Facility—B
Enrichment Plant
Miscellaneous

Individual DOE facilities which are operated under award fee arrangements will be assigned to each category by the Procurement Executive, whose designee shall distribute a list of such assignments to all Heads of Contracting Activities (HCAs). In assigning facilities to categories, the Procurement Executive will consider the factors listed below, the determine the risks—technical, management, and financial—which the contractor will assume in fulfilling the contract requirements. Contracts which involve higher levels of risks shall be placed in higher categories and eligible for higher award fees. The Procurement Executive, or designee, shall review the category assignments on a regular basis or upon request by the HCA for a particular contract. Reassignments may be made based upon a change in contract requirements or changes in any of the following factors:

(1) Placement of the facility on the EPA's National Priority List (NPL). Facilities which are listed on the NPL shall be considered to involve higher risks.

(2) Nature of the contractor's work at the facility. Contracts involving the management of facilities listed on the NPL or requiring the environmental restoration of NPL sites, shall be considered to involve higher risks, whereas contracts involving unrelated work may be considered of lesser risk, regardless of NPL designations.

(3) Size of the facility in relationship to the areas at risk. Management of a large facility with a minor site designated on the NPL would be considered a lesser risk than management of a small facility which includes several major sites listed on the NPL.

(4) Quantity, complexity and type of Government property for which the contractor is responsible. Contracts requiring control over large quantities of sensitive Government property shall be considered of higher risk than those involving relatively small quantities.

(5) Exposure to Third-Party Liability. Contract activities which expose the contractor to the risk of third-party liability will be considered, and such risk assessed accordingly.

(6) The extent to which the work at the facility presents health and safety risks to the workers at the facility and the public.

In considering the factors above, any risks which are indemnified by the Government (for example, by the Price-Anderson Act) will not be considered as risks to the contractor. Where a single contract involves multiple facilities falling into different categories, the

basic fee amount shall be divided into amounts applicable for the operation of each facility before applying the award fee pool factor. The following potential award fees shall apply in each category (percent is stated as a percent of the otherwise applicable maximum fixed fee amount):

Category	Basic fee (percent)	Potential award fee (percent)	Potential maximum total (percent)
Defense Facility—A.....	100	200	300
Defense Facility—B.....	100	150	250
Enrichment Plant.....	100	150	250
Miscellaneous.....	100	100	200

(d) All management and operating contracts awarded on an award fee basis shall incorporate the following performance grading and fee conversion system into the contract, by including the system in the Performance Evaluation Plan required by the contract clause at 970.5204-54. The performance grading and fee conversion system consists of a set of adjective grades defined in a narrative, in terms of performance points, and in terms of the percentage of the available award fee earned as follows:

Fee Conversion Table

The contractor's performance shall be evaluated by the Fee Determination Official at the end of each evaluation period, and graded in accordance with the scale below:

Performance score	Percent of award fee earned
Outstanding—Any score in the Outstanding category will earn 100% of the available award fee.	
96 and above.....	100.0
Good:	
95.....	94.0
94.....	88.0
93.....	82.0
92.....	75.0
91.....	68.0
90.....	60.0
89.....	51.0
88.....	43.0
87.....	36.0
86.....	30.0
Satisfactory:	
85.....	25.0
84.....	20.0
83.....	15.0
82.....	10.0
81.....	5.0
80.....	0.0

Performance score	Percent of basic fee refunded
79.....	0.0
78.....	0.0
77.....	0.0
76.....	0.0

Performance score	Percent of basic fee refunded
Marginal:	
75.....	5.0
74.....	10.0
73.....	15.0
72.....	20.0
71.....	25.0
70.....	30.0
69.....	35.5
68.....	40.0
67.....	45.0
66.....	50.0
Unsatisfactory:	
Below 65.....	50.0

Performance scores should be rounded to the nearest tenth of a point and the percent of award fee determined accordingly (e.g., a score of 88.4 equals 42.0% of award fee earned).

NARRATIVE DESCRIPTION OF PERFORMANCE ADJECTIVES

Adjective	Definition (performance description)
Outstanding.....	Performance substantially exceeds expected levels of performance. Several significant or notable achievements exist. No notable deficiencies in performance.
Good.....	Performance exceeds expected levels and some notable achievements exist. Although some notable deficiencies exist.
Satisfactory.....	Performance meets expected levels. Minimum standards are exceeded and "good practices" are evident in contract operations. Notable achievements or notable deficiencies may or may not exist.
Marginal.....	Performance is less than expected. No notable achievements exist; however, some notable deficiencies exist, or any notable achievements which exist are more than offset by significant or notable deficiencies.

NARRATIVE DESCRIPTION OF PERFORMANCE ADJECTIVES—Continued

Adjective	Definition (performance description)
Unsatisfactory.....	Performance is below minimum acceptable levels. Significant deficiencies causing severe impacts on mission capabilities exist. Performance at this level in any area mentioned in the Performance Evaluation Plan may result in a decision by the Fee Determination Official to withhold all award fee for the period.

Definitions

Significant: This term indicates a major event or sustained level of performance which, due to its importance, has a substantial positive or negative impact on the contractor's ability to carry out its mission.

Notable: This term indicates an event or sustained level of performance which is of lesser importance than a "significant" event, but nonetheless deserves positive or negative recognition.

16. Section 970.5204-16 is proposed to be amended by revising the clause heading and Note 2, to read as follows:

970.5204-16 Payments and advances.

Payments and Advances (Date to be determined)

* * * * *

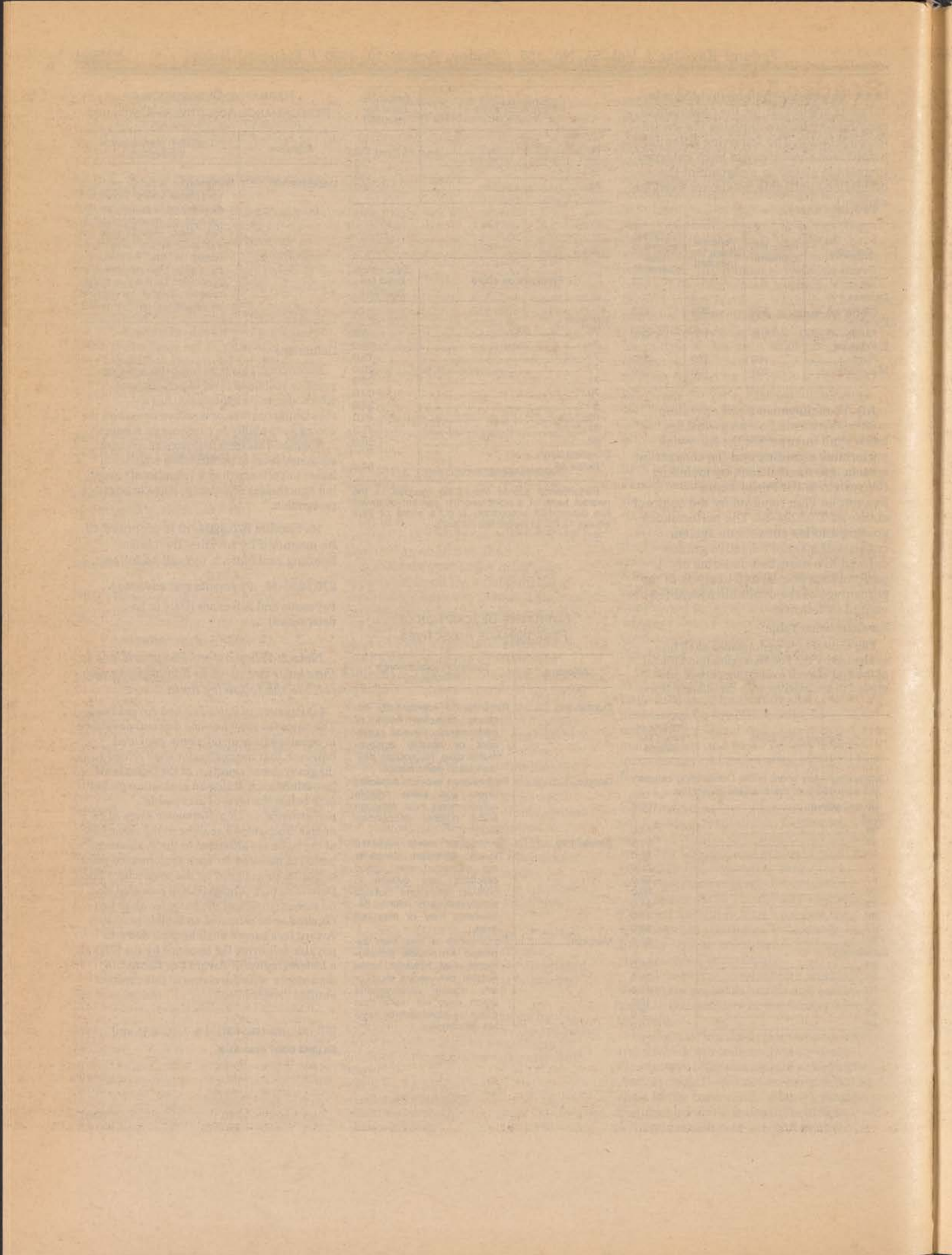
Note 2: When award-Fee provisions in the clause are used, in lieu of paragraph (a), use the following text:

(a) Payment of Basic Fee and Award Fee. The basic fee shall become due and payable in equal monthly installments, *provided*, however, that the contractor shall refund to the government a portion of the basic fee if its performance during an evaluation period falls below the level of acceptable performance, i.e., a performance score of 75 or less. Such refund shall be at the rate of 5% of the basic fee allocated to the evaluation period in question for each performance point below 76, as assigned by the government Fee Determination Official (FDO), provided that no more than 50% of the basic fee shall be required to be refunded under this provision. Award fees earned shall become due and payable following the issuance by the FDO of a Determination of Award Fee Earned, in accordance with the clause of this contract entitled "Award Fee."

* * * * *

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